

CWU Table Item #: 0191 (1 column)

NDP01 = Negalux N18, a diphenylamine diazonium resin from PCAS
 NDP02 = diazo resin No. 8 from FAIRMOUNT CHEMICAL
 NDP03 = methyl methacrylate, ADS-MONOMER 01 (82/18) copolymer
 NDP04 = homopolymer of ADS-MONOMER 01
 NDP05 = hydroxyethyl methacrylate, ADS-MONOMER 01 (80/20) copolymer
 NDP06 = methyl methacrylate, ADS-MONOMER 01 (80/20) copolymer
 NDP07 = N-isopropyl-acrylamide, ADS-MONOMER 01 (80/20) copolymer
 NDP08 = N-isopropyl-acrylamide, ADS-MONOMER 01 (85/15) copolymer
 NDP09 = N-t-butyl-acrylamide, ADS-MONOMER 01 (75/25) copolymer
 NDP10 = N-t-butyl-acrylamide, ADS-MONOMER 01 (70/30) copolymer
 NDP11 = hydroxyethyl methacrylate, 2-propenoic acid, 2-methyl-2-[[[(2-nitrophenyl)methoxy]carbonyl]amino]ethyl ester, ADS-MONOMER 01 (85/10/5) terpolymer
 NDP12 = hydroxyethyl methacrylate, ADS-MONOMER 01 (95/5) copolymer
 NDP13 = hydroxyethyl methacrylate, ADS-MONOMER 01 (97/3) copolymer
 NDP14 = hydroxyethyl methacrylate, ADS-MONOMER 01 (90/10) copolymer
 NDP15 = hydroxyethyl methacrylate, ADS-MONOMER 01 (80/20) copolymer
 NDP16 = methyl methacrylate, ADS-MONOMER 01 (40/60) copolymer
 NDP17 = methyl methacrylate, ADS-MONOMER 01 (60/40) copolymer
 NDP18 = phenyl methacrylate, ADS-MONOMER 01 (40/60) copolymer
 NDP19 = 3-methacryloxypropyltriisopropylsilane, methyl methacrylate, ADS-MONOMER 01 (10/70/20) copolymer
 NDP20 = 2-propenoic acid 2-phosphonooxyethyl ester, methyl methacrylate, ADS-MONOMER 01 (2/80/18) copolymer
 NDP21 = acrylic acid, ADS-MONOMER 01 (80/20) copolymer
 NDP22 = 4-(2-acryloyloxyethoxy)phenyl 2-hydroxy-2-propyl ketone, methyl methacrylate, ADS-MONOMER 01 (10/70/20) copolymer
 NDP23 = acrylonitrile, methyl methacrylate, ADS-MONOMER 01 (10/70/20) copolymer
 NDP24 = ADS-MONOMER 06, methyl methacrylate, ADS-MONOMER 01 (5/80/15) copolymer
 NDP25 = ADS-MONOMER 07, methyl methacrylate, ADS-MONOMER 01 (3/82/15) copolymer
 NDP26 = methyl methacrylate, ADS-MONOMER 02 (80/20) copolymer
 NDP27 = methyl methacrylate, ADS-MONOMER 03 (80/20) copolymer
 NDP28 = methyl methacrylate, ADS-MONOMER 05 (75/25) copolymer
 NDP29 = methyl methacrylate, ADS-MONOMER 04 (80/20) copolymer
 NDP30 = methyl methacrylate, ADS-MONOMER 01 (ammonium salt) (80/20) copolymer
 NDP31 = methyl methacrylate, ADS-MONOMER 01 (tetramethylammonium salt) (80/20) copolymer
 NDP32 = methyl methacrylate, ADS-MONOMER 01 (tetraethylammonium salt) (80/20) copolymer
 NDP33 = hydroxyethyl methacrylate, ADS-MONOMER 01 (85/15) copolymer
 NDP34 = condensation product of 4-diazodiphenylamine sulphate and formaldehyde
 NDP35 = condensation product of 4-diazodiphenylamine toluene sulphonate and formaldehyde
 NDP36 = condensation product of 4-diazodiphenylamine tetrafluoroborate and formaldehyde

+T1 +HZ,1/32

!+TL,1 NDP01 +32 ? +TL,6 Negalux N18, a diphenylamine diazonium resin from PCAS?

!NDP02 +32 ? diazo resin No. 8 from FAIRMOUNT CHEMICAL?

!NDP03 +32 ? methyl methacrylate, ADS-MONOMER 01 (82/18) copolymer?

!NDP04 +32 ? homopolymer of ADS-MONOMER 01?
!NDP05 +32 ? hydroxyethylacrylate, ADS-MONOMER 01 (80/20)?
!? copolymer?
!NDP06 +32 ? methyl methacrylate, ADS-MONOMER 01 (80/20)?
!? copolymer?
!NDP07 +32 ? N-isopropyl-acrylamide, ADS-MONOMER 01 (80/20)?
!? copolymer?
!NDP08 +32 ? N-isopropyl-acrylamide, ADS-MONOMER 01 (85/15)?
!? copolymer?
!NDP09 +32 ? N-t-butyl-acrylamide, ADS-MONOMER 01 (75/25)?
!? copolymer?
!NDP10 +32 ? N-t-butyl-acrylamide, ADS-MONOMER 01 (70/30)?
!? copolymer?
!NDP11 +32 ? hydroxyethyl methacrylate, 2-propenoic acid, 2-methyl-,2-?
!? +8 +55 +8 (2-nitrophenyl)methoxy+9 carbonyl+56 amino+9 ethyl ester, ADS-?
!? MONOMER 01 (85/10/5) terpolymer?
!NDP12 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (95/5)?
!? copolymer?
!NDP13 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (97/3)?
!? copolymer?
!NDP14 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (90/10)?
!? copolymer?
!NDP15 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (80/20)?
!? copolymer?
!NDP16 +32 ? methyl methacrylate, ADS-MONOMER 01 (40/60)?
!? copolymer?
!NDP17 +32 ? methyl methacrylate, ADS-MONOMER 01 (60/40) copolymer?
!NDP18 +32 ? phenyl methacrylate, ADS-MONOMER 01 (40/60) copolymer?
!NDP19 +32 ? 3-methacryloxypropyltriisopropylsilane, methyl?
!? methacrylate, ADS-MONOMER 01 (10/70/20) copolymer?
!NDP20 +32 ? 2-propenoic acid 2-phosphonooxy)ethyl ester, methyl?
!? methacrylate, ADS-MONOMER 01 (2/80/18) copolymer?
!NDP21 +32 ? acrylic acid, ADS-MONOMER 01 (80/20) copolymer?
!NDP22 +32 ? 4-(2-acryloyloxyethoxy)phenyl 2-hydroxy-2-propyl ketone,?
!? methyl methacrylate, ADS-MONOMER 01 (10/70/20)?
!? copolymer?
!NDP23 +32 ? acrylonitrile, methyl methacrylate, ADS-MONOMER 01?
!? (10/70/20) copolymer?

3

!NDP24 +32 ? ADS-MONOMER 06, methyl methacrylate,?
 !? ADS-MONOMER 01 (5/80/15) copolymer?
 !NDP25 +32 ? ADS-MONOMER 07, methyl methacrylate,?
 !? ADS-MONOMER 01 (3/82/15) copolymer?
 !NDP26 +32 ? methyl methacrylate, ADS-MONOMER 02 (80/20)?
 !? copolymer?
 !NDP27 +32 ? methyl methacrylate, ADS-MONOMER 03 (80/20)?
 !? copolymer?
 !NDP28 +32 ? methyl methacrylate, ADS-MONOMER 05 (75/25)?
 !? copolymer?
 !NDP29 +32 ? methyl methacrylate, ADS-MONOMER 04 (80/20)?
 !? copolymer?
 !NDP30 +32 ? methyl methacrylate, ADS-MONOMER 01?
 !? (ammonium salt) (80/20) copolymer?
 !NDP31 +32 ? methyl methacrylate, ADS-MONOMER 01?
 !? (tetramethylammonium salt) (80/20) copolymer?
 !NDP32 +32 ? methyl methacrylate, ADS-MONOMER 01?
 !? (tetraethylammonium salt) (80/20) copolymer?
 !NDP33 +32 ? hydroxyethyl methacrylate, ADS-MONOMER 01 (85/15)?
 !? copolymer?
 !NDP34 +32 ? condensation product of 4-diazodiphenylamine sulphate and?
 !? formaldehyde?
 !NDP35 +32 ? condensation product of 4-diazodiphenylamine toluene?
 !? sulphonate and formaldehyde?
 !NDP36 +32 ? condensation product of 4-diazodiphenylamine?
 !? tetrafluoroborate and formaldehyde+TZ,1/32 ?
 !+PS

Item character count = 2770

CWU Table Item #: 0232 (1 column)

PQD01 = AZ 7217, a positive working photoresist from CLARIANT
 PQD02 = 2-diazo-1-naphthol-5-sulfonic acid sodium salt
 PQD03 = 1-diazo-2-naphthol-4-sulfonic acid sodium salt
 PQD04 = 2-diazo-1-naphthol-5-(4'-methyl-phenylsulphonate)
 PQD05 = 2-diazo-1-naphthol-5-phenylsulphonate
 PQD06 = bis(6'-diazo-5'-oxy-5'-sulphonate naphthalene)-2,4-benzophenone
 PQD07 = 2-diazo-1-oxy-(2'-benzotriazolyl-4'-methyl-phenyl)-5-sulphonate naphthalene

-continued

| | |
|---------|--|
| PQD08 = | partial esterification product of 1,2-naphthoquinone (2) diazide-5-sulfonyl chloride and a p-t-butylphenol- formaldehyde copolymer |
| PQD09 = | partial esterification product of 1,2-naphthoquinone diazide-5-sulfonyl chloride and a cresol formaldehyde polymer |
| PQD10 = | partial esterification product of 1,2-naphthoquinone (2) diazide-5-sulfonylchloride and a p-cresol-formaldehyde resin |
| PQD11 = | partial esterification product of 1,2-naphthoquinone (2) diazide-5-sulfonyl chloride and a p-t-butylphenol- formaldehyde copolymer |

+T1 +HZ,1/32

!+TL,1 PQD01 +32 ? +TL,7 AZ 7217, a positive working photoresist from CLARIANT?

!PQD02 +32 ? 2-diazo-1-naphthol-5-sulfonic acid sodium salt?

!PQD03 +32 ? 1-diazo-2-naphthol-4-sulfonic acid sodium salt?

!PQD04 +32 ? 2-diazo-1-naphthol-5-(4+40 -methyl-phenylsulphonate)?

!PQD05 +32 ? 2-diazo-1-naphthol-5-phenylsulphonate?

!PQD06 +32 ? bis(6+40 -diazo-5+40 -oxy-5+40 -sulphonate naphthalene)-2,4-?

!? benzophenone?

!PQD07 +32 ? 2-diazo-1-oxy-(2+40 -benzotriazolyl-4+40 -methyl-phenyl)-5-?

!? sulphonate naphthalene?

!PQD08 +32 ? partial esterification product of 1,2-naphthoquinone (2)?

!? diazide-5-sulfonyl chloride and a p-t-butylphenol-?

!? formaldehyde copolymer?

!PQD09 +32 ? partial esterification product of 1,2-naphthoquinone?

!? diazide-5-sulfonyl chloride and a cresol formaldehyde?

!? polymer?

!PQD10 +32 ? partial esterification product of 1,2-naphthoquinone (2)?

!? diazide-5-sulfonylchloride and a p-cresol-formaldehyde?

!? resin?

!PQD11 +32 ? partial esterification product of 1,2-naphthoquinone (2)?

!? diazide-5-sulfonyl chloride and a p-t-butylphenol-?

!? formaldehyde copolymer+TZ,1/32 ?

!+PS

Item character count = 999

CWU Table Item #: 0272 (1 column)

| Support nr. | Composition |
|----------------|--|
| 01 | subbing layer consisting of 79.1% LATEX01; 18.6% KIESELSOL™ 100F; 0.5% MERSOLAT™ H; and 1.9% ULTRAVON™ W |
| 02 | surface treated with a corona discharge |
| 03 | surface treated with an glow discharge |
| 04 | subbing layer consisting of a first layer of 79.1% LATEX01; 18.6% KIESELSOL™ 100F; 0.5% MERSOLAT™ H; and 1.9% ULTRAVON™ W; and an outermost layer consisting of 49% gelatin, 44% KIESELSOL™ 300F, 1.72% ULTRAVON™ W, 0.86% ARKOPAL™ N060, 2.86% hexylene glycol, 1.43% trimethylol propane and 0.13% polymethyl methacrylate, a 3 µm matting agent. |
| 05 | subbing layer consisting of 77.2% of LATEX02; 5.8% of LATEX03; 1.3% HORDAMER™ PE02 and 14.6% PAREZ RESIN™ 613. |
| 06 | subbing layer consisting of a first layer of 85.6% of LATEX01, 9.5% of KIESELSOL™ 100F, 2.5% of PEDOT/PSS, 0.5% of MERSOLAT™ 76H and 1.9% ULTRAVON™ W; and an outermost layer consisting of 49% gelatin, 44% KIESELSOL™ 300F, 1.72% ULTRAVON™ W, 0.86% ARKOPAL™ N060, 2.86% 2-methyl-2,4-pentanediol 1.43% trimethylol propane and 0.13% polymethyl methacrylate 3 µm matting agent. |
| 07 | subbing layer consisting of 79.8% LATEX02; 19.9% KIESELSOL™ 100F; and 0.3% ARKOPON™ T |
| 08 | subbing layer consisting of 75.0% LATEX01, 9.0% LATEX03 and 16.0% KIESELSOL™ 100F |

+T1 +HZ,1/32

!+HC,1 Support? +HL,6 ?

!nr.? Composition+HZ,1/32 ?

!+TC,1 01? +TL,6 subbing layer consisting of 79.1% LATEX01; 18.6%?

! ? KIESELSOL+12 +198 +0 100F; 0.5% MERSOLAT+12 +198 +0 H; ?

! ? and 1.9% ULTRAVON+12 +198 +0 W?

!02? surface treated with a corona discharge?

!03? surface treated with an glow discharge?

!04? subbing layer consisting of a first layer of 79.1%?

! ? LATEX01; 18.6% KIESELSOL+12 +198 +0 100F; ?

! ? 0.5% MERSOLAT+12 +198 +0 H; and 1.9% ULTRAVON+12 +198 +0 W; ?

! ? and an outermost layer consisting of 49% gelatin, ?

! ? 44% KIESELSOL+12 +198 +0 300F, 1.72% ULTRAVON+12 +198 +0 W, ?

! ? 0.86% ARKOPAL+12 +198 +0 N060, 2.86% hexylene glycol, 1.43%?

! ? trimethylol propane and 0.13% polymethyl methacrylate, a?

! ? 3 +82 m matting agent.?

!05? subbing layer consisting of 77.2% of LATEX02; 5.8% of?

! ? LATEX03; 1.3% HORDAMER+12 +198 +0 PE02?

! ? and 14.6% PAREZ RESIN+12 +198 +0 613.?

!06? subbing layer consisting of a first layer of 85.6% of?

! ? LATEX01, 9.5% of KIESELSOL+12 +198 +0 100F, ?

! ? 2.5% of PEDOT/PSS, 0.5% of MERSOLAT+12 +198 +0 76H and?

! ? 1.9% ULTRAVON+12 +198 +0 W; and an?

! ? outermost layer consisting of 49% gelatin, 44%?
 ! ? KIESELSOL+12 +198 +0 300F, 1.72% ULTRAVON+12 +198 +0 W, ?
 ! ? 0.86% ARKOPAL+12 +198 +0 N060, 2.86% 2-methyl-2,4-pentanediol?
 ! ? 1.43% trimethylol propane and 0.13% polymethyl methacrylate?
 ! ? 3 +82 m matting agent.?
 !07? subbing layer consisting of 79.8% LATEX02; 19.9%?
 ! ? KIESELSOL+12 +198 +0 100F; and 0.3% ARKOPON+12 +198 +0 T?
 !08? subbing layer consisting of 75.0% LATEX01, ?
 ! ? 9.0% LATEX03 and 16.0% KIESELSOL+12 +198 +0 100F+TZ, 1/32 ?
 !+PS

Item character count = 1305

CWU Table Item #: 0331 (2 columns)

TABLE 7

| INGREDIENT [g] | SAMPLE | | | | | |
|--|--------|-------|-------|--------|-------|-------|
| | XXV | XXVI | XXVII | XXVIII | XXIX | XXX |
| 1.2% aq. PEDOT/PSS dispersion | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 |
| 2% aq. sol. of ZONYL™ FSO 100 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| N-methyl-pyrrolidinone | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 |
| 2.5% aqueous NH ₄ OH solution | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| 15.16% aq. solution of NDP06 | 0.66 | — | — | — | — | — |
| 17.03% aq. solution of NDP07* | — | 0.59 | — | — | — | — |
| 18.34% aq. solution of NDP08* | — | — | 0.54 | — | — | — |
| 16.8% aq. solution of NDP09* | — | — | — | 0.59 | — | — |
| 17.39% aq. solution of NDP10* | — | — | — | — | 0.57 | — |
| 16.63% aq. solution of NDP11* | — | — | — | — | — | 0.60 |
| deionized water | 29.19 | 29.26 | 29.31 | 29.26 | 29.28 | 29.25 |
| COVERAGE | | | | | | |
| PEDOT/PSS [mg/m ²] | 200 | 200 | 200 | 200 | 200 | 200 |
| NDP06 [mg/m ²] | 100 | — | — | — | — | — |
| NDP07 [mg/m ²] | — | 100 | — | — | — | — |
| NDP08 [mg/m ²] | — | — | 100 | — | — | — |
| NDP09 [mg/m ²] | — | — | — | 100 | — | — |
| NDP10 [mg/m ²] | — | — | — | — | 100 | — |
| NDP11 [mg/m ²] | — | — | — | — | — | 100 |
| ZONYL FSO 100 [mg/m ²] | 8 | 8 | 8 | 8 | 8 | 8 |

*solution in water/isopropanol 40/60 by volume

+T2 TABLE 7+HZ, 1/41

!+HC, 17 +UZ, 17/41 SAMPLE?

!+HC, 17 XXV? +HC, 21 XXVI? +HC, 25 XXVII? +HC, 29 XXVIII? +HC, 33 XXIX? +HC, 37 XXX+HZ, 1/41

?

!+TL, 1 +UZ, 1/9 INGREDIENT +8 g+9 ? +TA, 17 ? +TA, 21 ? +TA, 25 ? +TA, 29 ? +TA, 33 ? +TA, 37

?

!1.2% aq. PEDOT/PSS dispersion? 16.7? 16.7? 16.7? 16.7? 16.7? 16.7?

!2% aq. sol. of ZONYL+12 +198 +0 FSO 100? 0.50? 0.50? 0.50? 0.50? 0.50? 0.50?

!N-methyl-pyrrolidinone? 2.50? 2.50? 2.50? 2.50? 2.50? 2.50?

!2.5% aqueous NH+HD 4+L OH solution? 0.45? 0.45? 0.45? 0.45? 0.45? 0.45?

!15.16% aq. solution of NDP06? 0.66? +13 ? +13 ? +13 ? +13 ? +13 ?

!17.03% aq. solution of NDP07*? +13 ? 0.59? +13 ? +13 ? +13 ? +13 ?

!18.34% aq. solution of NDP08*? +13 ? +13 ? 0.54? +13 ? +13 ? +13 ?

!16.8% aq. solution of NDP09*? +13 ? +13 ? +13 ? 0.59? +13 ? +13 ?

!17.39% aq. solution of NDP10*? +13 ? +13 ? +13 ? +13 ? 0.57? +13 ?

!16.63% aq. solution of NDP11*? +13 ? +13 ? +13 ? +13 ? +13 ? 0.60?

!deionized water? 29.19? 29.26? 29.31? 29.26? 29.28? 29.25?

!+UZ,1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200? 200?

!NDP06 +8 mg/m+HU 2+L +9 ? 100? +13 ? +13 ? +13 ? +13 ? +13 ?

!NDP07 +8 mg/m+HU 2+L +9 ? +13 ? 100? +13 ? +13 ? +13 ? +13 ?

!NDP08 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? 100? +13 ? +13 ? +13 ?

!NDP09 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? 100? +13 ? +13 ?

!NDP10 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? 100? +13 ?

!NDP11 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? +13 ? 100?

!ZONYL FSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8? 8? 8+TZ,1/41 ?

!+L6 *solution in water/isopropanol 40/60 by volume

!+PS

Item character count = 983

CWU Table Item #: 0344 (2 columns)

TABLE 8

| PROPERTY | SAMPLE | | | | | |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| | XXV | XXVI | XXVII | XXVIII | XXIX | XXX |
| $R_s(\Omega/\text{square})$ of coated layer before patterning | 3.2×10^3 | 4.5×10^3 | 3.4×10^3 | 3.8×10^3 | 3.2×10^3 | 2.9×10^3 |
| $R_s(\Omega/\text{square})$ of non-exposed areas after exposure and processing | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ |
| $R_s(\Omega/\text{square})$ of exposed areas after exposure and processing | 1.5×10^4 | 1.8×10^4 | 1.5×10^4 | 1.5×10^4 | 1.0×10^4 | 1.2×10^4 |
| R_s ratio non-exposed/exposed areas | >2700 | >2200 | >2700 | >2700 | >4000 | >3300 |

+T2 TABLE 8+HZ,1/41

!+HC,11 +UZ,11/41 SAMPLE?

!+HL,1 PROPERTY? +HL,11 XXV? +HL,16 XXVI? +HL,21 XXVII? +HL,26 XXVIII? +HL,31 XXIX?

DA: data54 — MD: 6/23/2003 — N: 5,790,513 — F: 04 — 7/18/2003 - 8:02:47 AM

8

+HL,36 XXX+HZ,1/41 ?

!+TL,1 R+HD s+L (+106 /square) of coated? +TL,11 3.2 +33 +0 10+HU 3? +TL,16 4.5 +33 +0 10+HU 3? +TL,21 3.4 +33 +0 10+HU 3? +TL,26 3.8 +33 +0 10+HU 3? +TL,31 3.2 +33 +0 10+HU 3? +TL,36 2.9 +33 +0 10+HU 3?

!layer before patterning?

!R+HD s+L (+106 /square) of non-? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7?

!exposed areas after?

!exposure and?

!processing?

!R+HD s+L (+106 /square) of? 1.5 +33 +0 10+HU 4? 1.8 +33 +0 10+HU 4? 1.5 +33 +0 10+HU 4? 1.5 +33 +0 10+HU 4? 1.0 +33 +0 10+HU 4? 1.2 +33 +0 10+HU 4?

!exposed?

!areas after?

!exposure?

!and processing?

!R+HD s +L ratio non-exposed/? +22 2700? +22 2200? +22 2700? +22 2700? +22 4000? +22 3300?

!exposed areas+TZ,1/41 ?

!+PS

Item character count = 547

CWU Table Item #: 0346 (1 column)

TABLE 9

| composition of the coating dispersions | | | | |
|--|--------|-------|--------|-------|
| INGREDIENT | SAMPLE | | | |
| | XXXI | XXXII | XXXIII | XXXIV |
| 1.2% aq. dispersion of PEDOT/PSS | 16.7 | 16.7 | 16.7 | 16.7 |
| 2% aq. solution of ZONYL™ PSO 100 | 0.50 | 0.50 | 0.50 | 0.50 |
| N-methyl-pyrrolidinone | 2.50 | 2.50 | 2.50 | 2.50 |
| 2.5% aqueous NH ₄ OH solution | 0.45 | 0.45 | 0.45 | 0.45 |
| 15.16% aq. solution of NDP06 | 0.66 | — | — | — |
| 15.9% aq. solution of NDP12* | — | 0.63 | — | — |
| 15.9% aq. solution of NDP13* | — | — | 0.63 | — |
| 15.9% aq. solution of NDP14* | — | — | — | 0.63 |
| deionized water | 29.19 | 29.22 | 29.22 | 29.22 |
| COVERAGE | | | | |
| PEDOT/PSS [mg/m ²] | 200 | 200 | 200 | 200 |
| NDP06 [mg/m ²] | 100 | — | — | — |
| NDP12 [mg/m ²] | — | 100 | — | — |

TABLE 9-continued

| <u>composition of the coating dispersions</u> | | | | |
|---|---------------|-------|--------|-------|
| | <u>SAMPLE</u> | | | |
| | XXXI | XXXII | XXXIII | XXXIV |
| NDP13 [mg/m ²] | — | — | 100 | — |
| NDP14 [mg/m ²] | — | — | — | 100 |
| ZONYL PSO 100 [mg/m ²] | 8 | 8 | 8 | 8 |

*solution in water/isopropanol 40/60 by volume

+T1 TABLE 9+HZ,1/32

!+HC,1 +UZ,8/25 composition of the coating dispersions?

!+HC,15 +UZ,15/32 SAMPLE?

!+HC,15 XXXI? +HC,19 XXXII? +HC,23 XXXIII? +HC,28 XXXIV+HZ,1/32 ?

!+TL,1 +UZ,1/8 INGREDIENT? +TA,15 ? +TA,19 ? +TA,23 ? +TA,28 ?

!1.2% aq. dispersion of? 16.7? 16.7? 16.7? 16.7?

!PEDOT/PSS?

!2% aq. solution of? 0.50? 0.50? 0.50? 0.50?

!ZONYL+12 +198 +0 PSO 100?

!N-methyl-pyrrolidinone? 2.50? 2.50? 2.50? 2.50?

!2.5% aqueous NH+HD 4+L OH solution? 0.45? 0.45? 0.45? 0.45?

!15.16% aq. solution of NDP06? 0.66? +13 ? +13 ? +13 ?

!15.9% aq. solution of NDP12*? +13 ? 0.63? +13 ? +13 ?

!15.9% aq. solution of NDP13*? +13 ? +13 ? 0.63? +13 ?

!15.9% aq. solution of NDP14*? +13 ? +13 ? +13 ? 0.63?

!deionized water? 29.19? 29.22? 29.22? 29.22?

!+UZ,1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200?

!NDP06 +8 mg/m+HU 2+L +9 ? 100? +13 ? +13 ? +13 ?

!NDP12 +8 mg/m+HU 2+L +9 ? +13 ? 100? +13 ? +13 ?

!NDP13 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? 100? +13 ?

!NDP14 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? 100?

!ZONYL PSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8+TZ,1/32 ?

!+L6 *solution in water/isopropanol 40/60 by volume

!+PS

Item character count = 765

TABLE 10

| PROPERTY | SAMPLE | | | |
|--|--------------------|--------------------|--------------------|-------------------|
| | XXXI | XXXII | XXXIII | XXXIV |
| $R_s(\Omega/\text{square})$ of coated layer before patterning | 2.8×10^3 | 1.9×10^3 | 1.6×10^3 | 1.8×10^3 |
| $R_s(\Omega/\text{square})$ of non-exposed areas after exposure and processing | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ | 1.6×10^8 |
| $R_s(\Omega/\text{square})$ of exposed areas after exposure and processing | 1.0×10^4 | 3.6×10^3 | 4.5×10^3 | 4.2×10^3 |
| Resistance ratio non-exposed/exposed areas | $>4 \times 10^3$ | $>1.1 \times 10^3$ | $>9 \times 10^3$ | 3.8×10^4 |
| Optical resolution of lines [μm] | 8 | 4 | 40 | 4 |
| Optical resolution of spaces [μm] | >70 | 6 | 6 | 6 |

+T1 TABLE 10+HZ,1/32

!+HC,12 +UZ,12/32 SAMPLE?

!+HL,1 PROPERTY? +HL,12 XXXI? +HL,17 XXXII? +HL,22 XXXIII? +HL,27 XXXIV+HZ,1/32 ?

!+TL,1 R+HD s+L (+106 /square) of coated? +TL,12 2.8 +33 +0 10+HU 3? +TL,17 1.9 +33 +0 10+HU 3? +TL,22 1.6 +33 +0 10+HU 3? +TL,27 1.8 +33 +0 10+HU 3?

!layer before patterning?

!R+HD s+L (+106 /square) of non-? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? 1.6 +33 +0 10+HU 8?

!exposed areas after?

!exposure and processing?

!R+HD s+L (+106 /square) of exposed? 1.0 +33 +0 10+HU 4? 3.6 +33 +0 10+HU 3? 4.5 +33 +0 10+HU 3? 4.2 +33 +0 10+HU 3?

!areas after exposure and?

!processing?

!Resistance ratio non-? +22 4 +33 +0 10+HU 3? +22 1.1 +33 +0 10+HU 3? +22 9 +33 +0 10+HU 3? 3.8 +33 +0 10+HU 4?

!exposed/exposed areas?

!Optical resolution of? 8? 4? 40? 4?

!lines +8 +82 m+9 ?

!Optical resolution of? +22 70? 6? 6? 6?

!spaces +82 m+9 +TZ,1/32 ?

!+PS

Item character count = 567

TABLE 11

| composition of the coating dispersions | | | | | | |
|--|--------|-------|--------|---------|-------|-------|
| INGREDIENT [g] | SAMPLE | | | | | |
| | XXXV | XXXVI | XXXVII | XXXVIII | XXXIX | XL |
| 1.2% aq. PEDOT/PSS dispersion | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 |
| 2% aq. sol. ZONYL™ FSO 100 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| 2.5% aqueous NH ₄ OH solution | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| 15.9% solution of NDP15* | 0.63 | — | — | — | — | — |
| 17.6% solution of NDP20* | — | 0.57 | — | — | — | — |
| 17.4% solution of NDP21* | — | — | 0.58 | — | — | — |
| 14.02% solution of NDP23* | — | — | — | 0.72 | — | — |
| 14.36% solution of NDP27* | — | — | — | — | 0.70 | — |
| 18.81% solution of NDP32* | — | — | — | — | — | 0.53 |
| deionized water | 31.67 | 31.73 | 31.72 | 31.58 | 31.60 | 31.77 |
| COVERAGE | | | | | | |
| PEDOT/PSS [mg/m ²] | 200 | 200 | 200 | 200 | 200 | 200 |
| NDP15 [mg/m ²] | 100 | — | — | — | — | — |
| NDP20 [mg/m ²] | — | 100 | — | — | — | — |
| NDP21 [mg/m ²] | — | — | 100 | — | — | — |
| NDP23 [mg/m ²] | — | — | — | 100 | — | — |
| NDP27 [mg/m ²] | — | — | — | — | 100 | — |
| NDP32 [mg/m ²] | — | — | — | — | — | 100 |
| ZONYL FSO 100 [mg/m ²] | 8 | 8 | 8 | 8 | 8 | 8 |

*solution in water/isopropanol 40/60 by volume

+T2 TABLE 11+HZ,1/44

!+HC,1 +UZ,14/31 composition of the coating dispersions?

!+HC,18 +UZ,18/44 SAMPLE?

!+HC,18 XXXV? +HC,22 XXXVI? +HC,26 XXXVII? +HC,31 XXXVIII? +HC,36 XXXIX? +HC,40

XL+HZ,1/44 ?

!+TL,1 +UZ,1/9 INGREDIENT +8 g+9 ? +TA,18 ? +TA,22 ? +TA,26 ? +TA,31 ? +TA,36 ? +TA,40

?

!1.2% aq. PEDOT/PSS dispersion? 16.7? 16.7? 16.7? 16.7? 16.7? 16.7?

!2% aq. sol. ZONYL+12 +198 +0 FSO 100? 0.50? 0.50? 0.50? 0.50? 0.50? 0.50?

!2.5% aqueous NH+HD 4+L OH solution? 0.50? 0.50? 0.50? 0.50? 0.50? 0.50?

!15.9% solution of NDP15*? 0.63? +13 ? +13 ? +13 ? +13 ? +13 ?

!17.6% solution of NDP20*? +13 ? 0.57? +13 ? +13 ? +13 ? +13 ?

!17.4% solution of NDP21*? +13 ? +13 ? 0.58? +13 ? +13 ? +13 ?

!14.02% solution of NDP23*? +13 ? +13 ? +13 ? 0.72? +13 ? +13 ?

!14.36% solution of NDP27*? +13 ? +13 ? +13 ? +13 ? 0.70? +13 ?

!18.81% solution of NDP32*? +13 ? +13 ? +13 ? +13 ? +13 ? 0.53?

!deionized water? 31.67? 31.73? 31.72? 31.58? 31.60? 31.77?

!+UZ,1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200? 200?

!NDP15 +8 mg/m+HU 2+L +9 ? 100? +13 ? +13 ? +13 ? +13 ? +13 ?

!NDP20 +8 mg/m+HU 2+L +9 ? +13 ? 100? +13 ? +13 ? +13 ? +13 ?

!NDP21 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? 100? +13 ? +13 ? +13 ?

12

!NDP23 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? 100? +13 ? +13 ?

!NDP27 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? 100? +13 ?

!NDP32 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? +13 ? 100?

!ZONYL FSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8? 8? 8+TZ,1/44 ?

!+L6 *solution in water/isopropanol 40/60 by volume

!+PS

Item character count = 948

CWU Table Item #: 0371 (2 columns)

TABLE 12

| PROPERTY | SAMPLE | | | | | |
|---|--------------------|--------------------|-------------------|----------------------|----------------------|----------------------|
| | XXXV | XXXVI | XXXVII | XXXVIII | XXXIX | XL |
| processing liquid | B | B | B | A | A | A |
| $R_s(\Omega/\text{square})$ of coated layer before patterning | 7.5×10^6 | 3.4×10^6 | 1.9×10^6 | 4.5×10^6 | 6.5×10^6 | 8.0×10^6 |
| $R_s(\Omega/\text{square})$ of non-exposed areas after exposure and processing | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ | 8.6×10^6 | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ | $>4.0 \times 10^7$ |
| $R_s(\Omega/\text{square})$ of exposed areas after exposure and processing | 4.5×10^6 | 2.1×10^6 | 8.2×10^6 | 5.7×10^6 | 2.7×10^6 | 4.0×10^6 |
| R_s ratio non-exposed/exposed areas | >8.9 | >19.0 | 1.0 | >7.0 | >14.8 | >10 |
| Optical resolution of lines [μm] | 4 | 4 | 4 | 4 | 4 | 4 |
| Optical resolution of spaces [μm] | 6 | 6 | 6 | 6 | 6 | 4 |
| $R_s(\Omega/\text{square})$ of non-exposed areas after processing and enhancement | 9.0×10^8 | 1.2×10^9 | 1.1×10^7 | 4.3×10^{12} | 5.4×10^{10} | 4.5×10^{12} |
| $R_s(\Omega/\text{square})$ of exposed areas after exposure, processing and enhancement | 9.1×10^3 | 9.5×10^3 | 2.7×10^4 | 3.8×10^4 | 4.0×10^3 | 5.9×10^3 |
| R_s ratio non-exposed/exposed areas after enhancement | 9.9×10^4 | 1.3×10^5 | 400 | 1.13×10^8 | 1.35×10^7 | 7.6×10^8 |

+T2 TABLE 12+HZ,1/42

!+HC,12 +UZ,12/42 SAMPLE?

!+HL,1 PROPERTY? +HL,12 XXXV? +HL,17 XXXVI? +HL,22 XXXVII? +HL,27 XXXVIII? +HL,32 XXXIX?

+HL,37 XL+HZ,1/42 ?

!+TL,1 processing liquid? +TL,12 B? +TL,17 B? +TL,22 B? +TL,27 A? +TL,32 A? +TL,37 A?

!R+HD s+L (+106 /square) of coated? 7.5 +33 +0 10+HU 6? 3.4 +33 +0 10+HU 6? 1.9 +33 +0 10+HU 6? 4.5 +33 +0 10+HU 6? 6.5 +33 +0 10+HU 6? 8.0 +33 +0 10+HU 6?

!layer before patterning?

!R+HD s+L (+106 /square) of non-? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? 8.6 +33 +0 10+HU 6? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7? +22 4.0 +33 +0 10+HU 7?

!exposed areas after?

DA: data54 — MD: 6/23/2003 — N: 5,790,513 — F: 04 — 7/18/2003 - 8:02:47 AM

13

!exposure and processing?

!R+HD s+L (+106 /square) of exposed? 4.5 +33 +0 10+HU 6? 2.1 +33 +0 10+HU 6? 8.2 +33 +0 10+HU 6? 5.7 +33 +0 10+HU 6? 2.7 +33 +0 10+HU 6? 4.0 +33 +0 10+HU 6?

!areas after exposure and?

!processing?

!R+HD s +L ratio non-exposed/? +22 8.9? +22 19.0? 1.0? +22 7.0? +22 14.8? +22 10?

!exposed areas?

!Optical resolution of? 4? 4? 4? 4? 4? 4?

!lines +8 +82 m+9 ?

!Optical resolution of? 6? 6? 6? 6? 6? 4?

!spaces +8 +82 m+9 ?

!R+HD s+L (+106 /square) of non-? 9.0 +33 +0 10+HU 8? 1.2 +33 +0 10+HU 9? 1.1 +33 +0 10+HU 7? 4.3 +33 +0 10+HU 12? 5.4 +33 +0 10+HU 10? 4.5 +33 +0 10+HU 12?

!exposed areas after?

!processing and?

!enhancement?

!R+HD s+L (+106 /square) of exposed? 9.1 +33 +0 10+HU 3? 9.5 +33 +0 10+HU 3? 2.7 +33 +0 10+HU 4? 3.8 +33 +0 10+HU 4? 4.0 +33 +0 10+HU 3? 5.9 +33 +0 10+HU 3?

!areas after exposure,?

!processing and?

!enhancement?

!R+HD s +L ratio non-? 9.9 +33 +0 10+HU 4? 1.3 +33 +0 10+HU 5? 400? 1.13 +33 +0 10+HU 8? 1.35 +33 +0 10+HU 7? 7.6 +33 +0 10+HU 8?

!exposed/exposed areas?

!after enhancement+TZ,1/42 ?

!+PS

Item character count = 1076

CWU Table Item #: 0392 (1 column)

TABLE 13

| <u>composition of PEDOT/PSS-containing coating dispersions</u> | | | |
|--|--------|------|--|
| INGREDIENT [g] | SAMPLE | | |
| | XLI | XLII | |
| 1.2% aqueous dispersion of PEDOT/PSS | 125 | 500 | |
| Z6040 | 1.0 | 1.0 | |
| 2% aqueous solution of ZONYL™ FSO 100 | 1.5 | 1.5 | |

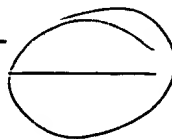


TABLE 13-continued

| <u>composition of PEDOT/PSS-containing coating dispersions</u> | | |
|--|---------------|------|
| | <u>SAMPLE</u> | |
| | XLI | XLII |
| N-methyl-pyrrolidinone | 50 | 50 |
| deionized water | 825 | 450 |
| <u>COVERAGE [mg/m²]</u> | | |
| PEDOT/PSS | 100 | 400 |
| ZONYL™ FSO 100 | 2 | 8 |

+T1 TABLE 13+HZ,1/32

!+HC,1 +UZ,4/29 composition of PEDOT/PSS-containing coating dispersions?

!+HC,23 +UZ,23/32 SAMPLE?

!+HC,23-~~XLII~~? +HC,26 XLII+HZ,1/32 ?

!+TL,3 +UZ,1/9 INGREDIENT +8 g+9 ? +TA,23 ? +TA,26 ?

!1.2% aqueous dispersion of PEDOT/PSS? 125? 500?

!Z6040? 1.0? 1.0?

!2% aqueous solution of ZONYL+12 +198 +0 FSO 100? 1.5? 1.5?

!N-methyl-pyrrolidinone? 50? 50?

!deionized water? 825? 450?

!+UZ,3/13 COVERAGE +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 100? 400?

!ZONYL+12 +198 +0 FSO 100? 2? 8+TZ,1/32 ?

!+PS

Item character count = 342

Folder character count = 10302

CWU Table Item #: 0393 (1 column)

TABLE 14

| <u>composition of the coating dispersions</u> | |
|---|-----------------|
| INGREDIENT | SAMPLE XLIII |
| 1.2% aqueous dispersion of PEDOT/PSS | 300 |
| PQD01 | 100 |
| 1% aqueous solution of ZONYL™ FSO 100 | 40 |
| N-methyl-pyrrolidinone | 560 |

+T1 TABLE 14+HZ,1/32

!+HC,1 +UZ,8/25 composition of the coating dispersions?

!+HL,3 ? +HC,22 SAMPLE?

!INGREDIENT? XLIII+HZ,1/32 ?

!+TL,3 1.2% aqueous dispersion of PEDOT/PSS? +TA,22 300?

!PQD01? 100?

!1% aqueous solution of ZONYL+12 +198 +0 FSO 100? 40?

!N-methyl-pyrrolidinone? 560+TZ,1/32 ?

!+PS

Item character count = 211

CWU Table Item #: 0421 (1 column)

TABLE 17

| <u>INGREDIENT [g]</u> | <u>SAMPLE</u> | | |
|--|---------------|-------|-------|
| | LI (COMP) | LII | LIII |
| 1.2% aq. PEDOT/PSS dispersion | 41.7 | 41.7 | 41.7 |
| 2% aq. sol. of ZONYL™ FSO 100 | 1 | 1 | 1 |
| N-methyl-pyrrolidinone | — | — | — |
| BADS01 | — | 0.125 | 0.25 |
| 2.5% aqueous NH ₄ OH solution | 2.28 | 2.48 | 2.33 |
| deionized water | 55.02 | 54.70 | 54.72 |
| <u>COVERAGE</u> | | | |
| PEDOT/PSS [mg/m ²] | 200 | 200 | 200 |
| BADS01 [mg/m ²] | — | 50 | 100 |
| ZONYL™ FSO 100 [mg/m ²] | 8 | 8 | 8 |

+T1 TABLE 17+HZ,1/32

!+HC,17 +UZ,17/32 SAMPLE?

!+HC,17 LI (COMP)? +HC,24 LII? +HC,28 LIII+HZ,1/32 ?

!+TL,1 +UZ,1/9 INGREDIENT +8 g+9 ?

!+TL,1 1.2% aq. PEDOT/PSS dispersion? +TA,17 41.7? +TA,24 41.7? +TA,28 41.7?

!2% aq. sol. of ZONYL+12 +198 +0 FSO 100? 1? 1? 1?

!N-methyl-pyrrolidinone? +TC +13 ? +TC +13 ? +TC +13 ?

!BADS01? +13 ? +TA 0.125? +TA 0.25?

2

!2.5% aqueous NH₄OH solution? +TA 2.28? 2.48? 2.33?

!deionized water? 55.02? 54.70? 54.72?

!+UZ,1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200?

!BADS01 +8 mg/m+HU 2+L +9 ? +TC +13 ? 50? 100?

!ZONYL+12 +198 +0 FSO 100 +8 mg/m+HU 2+L +9 ? +TA 8? 8? 8+TZ,1/32 ?

!+PS

Item character count = 397

CWU Table Item #: 0431 (1 column)

TABLE 18

| | SAMPLE | | |
|---|------------------------|----------------------|----------------------|
| | LI (COMP) | LII | LIH |
| R _s of non-exposed layer unrinsed with water [Ω /square] | 3.2×10^6 | 1.4×10^6 | 6.3×10^4 |
| R _s of non-exposed layer rinsed with water [Ω /square] | 1.5×10^{10} | 7.1×10^{11} | 2.0×10^{14} |
| R _s of exposed layer unrinsed with water [Ω /square] | 3.0×10^6 | 4.8×10^6 | 4.5×10^5 |
| R _s of exposed layer rinsed with water [Ω /square] | 7.9×10^{14} * | 2.0×10^6 | 4.5×10^5 |
| R _s ratio for exposed layer to unex-posed layer after rinsing with water | — | 3.6×10^5 | 4.4×10^8 |
| Optical resolution [μ m] | none | 4-6 | 4-6 |
| bubbles in surface of large exposed areas | — | yes | yes |
| surface resistivity of exposed layer treated with water [Ω /square] and conductivity enhanced | — | 1.4×10^3 | 2.1×10^3 |

*exposed layer removed

+T1 TABLE 18+HZ,1/32

!+HC,14 +UZ,14/32 SAMPLE?

!+HC,14 LI (COMP)? +HC,20 LII? +HC,26 LIH+HZ,1/32 ?

!+TL,1 R+HD s +L of non-exposed layer un-? +TC,14 3.2 +33 +0 10+HU 6? +TC,20 1.4 +33 +0 10+HU 6? +TC,26 6.3 +33 +0 10+HU 4?

!rinsed with water +8 +106 /square+9 ?

!R+HD s +L of non-exposed layer rinsed? +HU +11 +L 1.5 +33 +0 10+HU 10? +HU +11 +L 7.1 +33 +0 10+HU 11? +HU +11 +L 2.0 +33 +0 10+HU 14?

!with water +8 +106 /square+9 ?

!R+HD s +L of exposed layer unrinsed? 3.0 +33 +0 10+HU 6? 4.8 +33 +0 10+HU 6? 4.5 +33 +0 10+HU 5?

!with water +8 +106 /square+9 ?

!R+HD s +L of exposed layer rinsed? +HU +11 +11 +L 7.9 +33 +0 10+HU 14*? 2.0 +33 +0 10+HU 6? 4.5 +33 +0 10+HU 5?

3

!with water +8 +106 /square+9 ?

!R+HD s +L ratio for exposed layer to? +13 ? 3.6 +33 +0 10+HU 5? 4.4 +33 +0 10+HU 8?

!unex-posed layer after rinsing?

!with water?

!Optical resolution +8 +82 m+9 ? none? 4+14 6? 4+14 6?

!bubbles in surface of large? +13 ? yes? yes?

!exposed areas?

!surface resistivity of exposed? +13 ? 1.4 +33 +0 10+HU 3? 2.1 +33 +0 10+HU 3?

!layer treated with water?

!+8 +106 /square+9 +0 and conductivity?

!enhanced+TZ,1/32 ?

!+L6 *exposed layer removed

!+PS

Item character count = 765

CWU Table Item #: 0441 (1 column)

TABLE 19

| <u>composition of the coating dispersions</u> | | | | |
|---|---------------|-------|-------|------|
| | <u>SAMPLE</u> | | | |
| | LIV | LV | LVI | LVII |
| <u>INGREDIENT [g]</u> | | | | |
| 1.2% aq. dispersion of PEDOT/ PSS | 16.7 | 16.7 | 16.7 | 16.7 |
| 1% solution of BADS01 | 7.5 | — | — | — |
| 1% solution of BADS03 | — | 7.5 | 9.0 | 10.0 |
| 2.5% aqueous NH ₄ OH solution | 1.1 | 1.0 | 0.8 | 1.0 |
| 15.9% solution of NDP33 in water/isopropanol 40/60 by volume | 0.16 | 0.16 | 0.38 | — |
| 2% aq. solution of ZONYL™ FSO 100 | 0.5 | 0.5 | 0.5 | 0.5 |
| N-methyl-pyrrolidinone | — | — | — | — |
| deionized water | 24.04 | 24.14 | 22.63 | 21.8 |
| pH | 3.71 | 3.85 | 3.65 | 3.67 |
| <u>COVERAGE [mg/m²]</u> | | | | |
| PEDOT/PSS | 200 | 200 | 200 | 200 |
| BADS01 | 75 | — | — | — |
| BADS03 | — | 75 | 90 | 100 |
| NDP33 | 25 | 25 | 60 | — |
| ZONYL FSO 100 | 10 | 10 | 10 | 10 |

+T1 TABLE 19+HZ,1/32

!+HC,1 +UZ,8/25 composition of the coating dispersions?

!+HC,16 +UZ,16/32 SAMPLE?

!+HC,16 LIV? +HC,20 LV? +HC,24 LVI? +HC,28 LVII+HZ,1/32 ?

!+TL,1 +UZ,1/9 INGREDIENT +8 g+9 ?

!+TL,1 1.2% aq. dispersion of PEDOT/? +TA,16 16.7? +TA,20 16.7? +TA,24 16.7? +TA,28

16.7?

!PSS?

!1% solution of BADS01? 7.5? +TC +13 ? +TC +13 ? +TC +13 ?

!1% solution of BADS03? +TC +13 ? +TA 7.5? +TA 9.0? +TA 10.0?

!2.5% aqueous NH₄HD 4+L OH solution? +TA 1.1? 1.0? 0.8? 1.0?

!15.9% solution of NDP33 in? 0.16? 0.16? 0.38? +TC +13 ?

!water/isopropanol 40/60 by volume?

!2% aq. solution of ZONYL+12 +198 ? 0.5? 0.5? 0.5? +TA 0.5?

!FSO 100?

!N-methyl-pyrrolidinone? +TC +13 ? +TC +13 ? +TC +13 ? +TC +13 ?

!deionized water? +TA 24.04? +TA 24.14? +TA 22.63? +TA 21.8?

!pH? 3.71? 3.85? 3.65? 3.67?

!+UZ,1/11 COVERAGE +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200?

!BADS01? 75? +TC +13 ? +TC +13 ? +TC +13 ?

!BADS03? +TC +13 ? +TA 75? +TA 90? +TA 100?

!NDP33? +TA 25? 25? 60? +TC +13 ?

!ZONYL FSO 100? 10? 10? 10? +TA 10+TZ,1/32 ?

!+PS

Item character count = 671

CWU Table Item #: 0451 (1 column)

TABLE 21

| <u>composition of the coating dispersions</u> | | | | | |
|--|--------|-------|-------|-------|-------|
| | SAMPLE | | | | |
| | LVIII | LIX | LX | LXI | LXII |
| <u>INGREDIENT [g]</u> | | | | | |
| 1.2% aq. dispersion of PEDOT/PSS | 41.7 | 41.7 | 41.7 | 41.7 | 41.7 |
| 2% aq. solution of ZONYL™ FSO 100 | 1 | 1 | 1 | 1 | 1 |
| BADS01 | 0.125 | 0.15 | 0.175 | 0.2 | 0.225 |
| 15.9% sol. of NDP15 in water/isopropanol (40/60 by volume) | 7.86 | 6.3 | 4.7 | 3.14 | 1.471 |
| N-methyl-pyrrolidinone | — | — | — | — | — |
| 2.5% aqueous NH ₄ OH solution | 1.24 | 1.24 | 1.24 | 1.24 | 1.24 |
| deionized water | 48.08 | 49.16 | 51.19 | 52.72 | 54.36 |
| pH | 3.25 | 3.34 | 3.38 | 3.1 | 3.28 |
| <u>COVERAGE [mg/m²]</u> | | | | | |
| PEDOT/PSS | 200 | 200 | 200 | 200 | 200 |
| BADS01 | 50 | 60 | 70 | 80 | 90 |
| NDP15 | 50 | 40 | 30 | 20 | 9 |

TABLE 21-continued

| | composition of the coating dispersions | | | | |
|---------------|--|-----|----|-----|------|
| | SAMPLE | | | | |
| | LVIII | LIX | LX | LXI | LXII |
| ZONYL FSO 100 | 8 | 8 | 8 | 8 | 8 |

+T1 TABLE 21+HZ,1/32

!+HC,1 +UZ,8/25 composition of the coating dispersions?

!+HC,12 +UZ,12/32 SAMPLE?

!+HC,12 LVIII? +HC,16 LIX? +HC,20 LX? +HC,24 LXI? +HC,28 LXII+HZ,1/32 ?

!+TL,1 +UZ,1/9 INGREDIENT +8 g+9 ?

!+TL,1 1.2% aq. dispersion? +TA,12 41.7? +TA,16 41.7? +TA,20 41.7? +TA,24 41.7? +TA,28 41.7?

!of PEDOT/PSS?

!2% aq. solution of? 1? 1? 1? 1? 1?

!ZONYL+12 +198 +0 FSO 100?

!BADS01? 0.125? 0.15? 0.175? 0.2? 0.225?

!15.9% sol. of NDP15? 7.86? 6.3? 4.7? 3.14? 1.471?

!in water/isopropanol?

!(40/60 by volume)?

!N-methyl-? +TC +13 ? +TC +13 ? +TC +13 ? +TC +13 ? +TC +13 ?

!pyrrolidinone?

!2.5% aqueous NH+HD 4+L OH? +TA 1.24? +TA 1.24? +TA 1.24? +TA 1.24? +TA 1.24?

!solution?

!deionized water? 48.08? 49.16? 51.19? 52.72? 54.36?

!pH? 3.25? 3.34? 3.38? 3.1? 3.28?

!+UZ,1/11 COVERAGE +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200? 200?

!BADS01? 50? 60? 70? 80? 90?

!NDP15? 50? 40? 30? 20? 9?

!ZONYL FSO 100? 8? 8? 8? 8? 8+TZ,1/32 ?

!+PS

Item character count = 645

CWU Table Item #: 0452 (1 column)

TABLE 20

| PROPERTY | SAMPLE | | | |
|--|----------------------|----------------------|----------------------|----------------------|
| | LIV | LV | LVI | LVII |
| Differentiation after processing between exposed and non-exposed areas | YES | YES | YES | YES |
| R_s (Ω /square) of coated layer before patterning | 9.3×10^6 | 1.3×10^7 | 1.5×10^7 | 1.6×10^7 |
| R_s (Ω /square) of large non-exposed areas after conductivity upgrading | 3.1×10^{13} | 4.0×10^{13} | 5.0×10^{14} | 5.0×10^{14} |
| R_s (Ω /square) of large exposed areas after exposure, processing and conductivity upgrading | 3.3×10^3 | 5.5×10^3 | 4.1×10^3 | 3.3×10^3 |
| R_s ratio non-exposed/exposed areas after conductivity upgrading | 9.4×10^9 | 7.3×10^9 | 1.2×10^{11} | 1.5×10^{11} |
| optical resolution | 4 μ m | 4 μ m | 4 μ m | 4 μ m |

+T1 TABLE 20+HZ,1/32

!+HC,18 +UZ,18/32 SAMPLE?

!+HL,1 PROPERTY? +HC,18 LIV? +HC,22 LV? +HC,25 LVI? +HC,28 LVII+HZ,1/32 ?

!+TL,1 Differentiation after processing? +TC,18 YES? +TC,22 YES? +TC,25 YES? +TC,28 YES?

!between exposed and non-exposed areas?

!R+HD s +L (+106 /square) of coated layer before? 9.3 +33 ? 1.3 +33 ? 1.5 +33 ? 1.6 +33 ?

!patterning? 10+HU 6? 10+HU 7? 10+HU 7? 10+HU 7?

!R+HD s +L (+106 /square) of large non-exposed? 3.1 +33 ? 4.0 +33 ? 5.0 +33 ? 5.0 +33 ?

!areas after conductivity upgrading? 10+HU 13? 10+HU 13? 10+HU 14? 10+HU 14?

!R+HD s +L (+106 /square) of large exposed areas? 3.3 +33 ? 5.5 +33 ? 4.1 +33 ? 3.3 +33 ?

!after exposure, processing and? 10+HU 3? 10+HU 3? 10+HU 3? 10+HU 3?

!conductivity upgrading?

!R+HD s +L ratio non-exposed/exposed areas? 9.4 +33 ? 7.3 +33 ? 1.2 +33 ? 1.5 +33 ?

!after conductivity upgrading? 10+HU 9? 10+HU 9? 10+HU 11? 10+HU 11?

!optical resolution? 4 +82 m? 4 +82 m? 4 +82 m? 4 +82 m+TZ,1/32 ?

!+PS

Item character count = 661

CWU Table Item #: 0465 (1 column)

TABLE 22

| PROPERTY | SAMPLE | | | | |
|--|--------------|--------------|--------------|--------------|--------------|
| | LVIII | LIX | LX | LXI | LXII |
| Differentiation after processing between exposed and non-exposed areas | YES | YES | YES | YES | YES |
| R_s (Ω /square) of coated layer | $1.3 \times$ | $1.1 \times$ | $4.1 \times$ | $4.1 \times$ | $9.1 \times$ |

TABLE 22-continued

| PROPERTY | SAMPLE | | | | |
|--|------------------------|------------------------|------------------------|------------------------|------------------------|
| | LVIII | LIX | LX | LXI | LXII |
| before patterning | 10 ⁷ | 10 ⁷ | 10 ⁶ | 10 ⁶ | 10 ⁵ |
| R _s (Ω/square) of large non-exposed areas after conductivity upgrading | 5.2 × 10 ¹⁵ | 2.6 × 10 ¹⁵ | 1.5 × 10 ¹⁵ | 2.0 × 10 ¹⁵ | 5.8 × 10 ¹⁵ |
| R _s (Ω/square) of exposed areas after exposure, processing and conductivity upgrading | 1.8 × 10 ³ | 3.2 × 10 ³ | 1.4 × 10 ³ | 1.9 × 10 ³ | 3.6 × 10 ³ |
| R _s ratio non-exposed/exposed areas after conductivity upgrading | 2.9 × 10 ¹² | 8.1 × 10 ¹¹ | 1.1 × 10 ¹² | 1.1 × 10 ¹² | 1.6 × 10 ¹² |
| bubbles in large areas? | no | no | no | yes | yes |

+T1 TABLE 22+HZ,1/32

!+HC,17 +UZ,17/32 SAMPLE?

!+HL,1 PROPERTY? +HC,17 LVIII? +HC,20 LIX? +HC,23 LX? +HC,26 LXI? +HC,29 LXII+HZ,1/32
?!+TL,1 Differentiation after processing? +TC,17 YES? +TC,20 YES? +TC,23 YES? +TC,26 YES?
+TC,29 YES?

!between exposed and non-exposed?

!areas?

!R+HD s +L (+106 /square) of coated layer? 1.3 +33 ? 1.1 +33 ? 4.1 +33 ? 4.1 +33 ? 9.1
+33 ?

!before patterning? 10+HU 7? 10+HU 7? 10+HU 6? 10+HU 6? 10+HU 5?

!R+HD s +L (+106 /square) of large non-exposed? 5.2 +33 ? 2.6 +33 ? 1.5 +33 ? 2.0 +33
? 5.8 +33 ?

!areas after conductivity upgrading? 10+HU 15? 10+HU 15? 10+HU 15? 10+HU 15? 10+HU 15?

!R+HD s +L (+106 /square) of exposed areas? 1.8 +33 ? 3.2 +33 ? 1.4 +33 ? 1.9 +33 ? 3.6
+33 ?

!after exposure, processing and? 10+HU 3? 10+HU 3? 10+HU 3? 10+HU 3? 10+HU 3?

!conductivity upgrading?

!R+HD s +L ratio non-exposed/exposed areas? 2.9 +33 ? 8.1 +33 ? 1.1 +33 ? 1.1 +33 ? 1.6
+33 ?

!after conductivity upgrading? 10+HU 12? 10+HU 11? 10+HU 12? 10+HU 12? 10+HU 12?

!bubbles in large areas+48 ? no? no? no? yes? yes+TZ,1/32 ?

!+PS

Item character count = 718

CWU Table Item #: 0470 (1 column)

TABLE 23

| composition of the coating dispersions | | | | | |
|---|--------|------|------|------|-------|
| | SAMPLE | | | | |
| | LXIII | LXIV | LXV | LXVI | LXVII |
| <u>INGREDIENT [g]</u> | | | | | |
| 1.2% aq. dispersion of PEDOT/PSS | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 |
| 2% aq. solution of ZONYL™ FSO 100 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 2.5% aqueous NH ₄ OH solution | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 1% aq. solution of BADS01 | — | 2.5 | 5.0 | 7.5 | 10.0 |
| 15.9% solution of NDP15 water/isopropanol 40/60 by volume | 0.63 | 0.47 | 0.32 | 0.16 | — |
| N-methyl-pyrrolidinone deionized water | — | — | — | — | — |
| pH | 31.7 | 29.3 | 27.0 | 24.6 | 22.3 |
| | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| <u>COVERAGE [mg/m²]</u> | | | | | |
| PEDOT/PSS | 200 | 200 | 200 | 200 | 200 |
| BADS01 | 0 | 25 | 50 | 75 | 100 |
| NDP15 | 100 | 75 | 50 | 25 | 0 |
| ZONYL FSO 100 | 10 | 10 | 10 | 10 | 10 |

+T1 TABLE 23+HZ,1/32

!+HC,1 +UZ,8/25 composition of the coating dispersions?

!+HC,12 +UZ,12/32 SAMPLE?

!+HC,12 LXIII? +HC,16 LXIV? +HC,20 LXV? +HC,24 LXVI? +HC,28 LXVII+HZ,1/32 ?

!+TL,1 +UZ,1/9 INGREDIENT +8 g+9 ?

!+TL,1 1.2% aq. dispersion of? +TA,12 16.7? +TA,16 16.7? +TA,20 16.7? +TA,24 16.7? +TA,28 16.7?

!PEDOT/PSS?

!2% aq. solution of? 0.5? 0.5? 0.5? 0.5? 0.5?

!ZONYL+12 +198 +0 FSO 100?

!2.5% aqueous NH+HD 4+L OH? 0.5? 0.5? 0.5? 0.5? 0.5?

!solution?

!1% aq. solution of? +TC +13 ? 2.5? 5.0? 7.5? 10.0?

!BADS01?

!15.9% solution of? +TA 0.63? 0.47? 0.32? 0.16? +TC +13 ?

!NDP15 water/isopro-

!panol 40/60 by volume?

!N-methyl-pyrrolidinone? +TC +13 ? +TC +13 ? +TC +13 ? +TC +13 ? +13 ?

!deionized water? +TA 31.7? +TA 29.3? +TA 27.0? +TA 24.6? +TA 22.3?

!pH? 3.3? 3.3? 3.3? 3.3? 3.3?

!+UZ,1/11 COVERAGE +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200? 200?

!BADS01? 0? 25? 50? 75? 100?

!NDP15? 100? 75? 50? 25? 0?

!ZONYL FSO 100? 10? 10? 10? 10? 10+TZ,1/32 ?

!+PS

Item character count = 662

CWU Table Item #: 0482 (1 column)

TABLE 24

| PROPERTY | SAMPLE | | | | |
|--|-------------------|-------------------|-------------------|----------------------|----------------------|
| | LXIII | LXIV | LXV | LXVI | LXVII |
| Exposure time [s] | 100 | 100 | 100 | 100 | 300 |
| Differentiation after processing between exposed and non-exposed areas | YES | YES | YES | YES | YES |
| R_s (Ω /square) of coated layer before patterning | 9.0×10^6 | 1.1×10^7 | 1.4×10^7 | 9.0×10^6 | 1.0×10^6 |
| R_s (Ω /square) of large non-exposed areas after processing and conductivity upgrading | 1.7×10^7 | 1.5×10^6 | 1.2×10^5 | 5.5×10^{14} | 3.5×10^{14} |
| R_s (Ω /square) of exposed areas after exposure, processing and conductivity upgrading | 1.4×10^4 | 8.2×10^3 | 5.5×10^3 | 7.4×10^3 | 7.8×10^3 |
| R_s ratio non-exposed/exposed areas after conductivity upgrading | 1.2×10^3 | 1.8×10^2 | 1.1×10^2 | 7.4×10^{10} | 4.5×10^{10} |
| Optical resolution of lines [μ] | 4 | 4 | 4 | 4 | 4 |
| Optical resolution of spaces [μ] | 4 | 4 | 4 | 4 | 4 |
| bubbles in large areas? | no | no | no | no | yes |

+T1 TABLE 24+HZ,1/32

!+HC,16 +UZ,16/32 SAMPLE?

!+HL,1 PROPERTY? +HC,16 LXIII? +HC,19 LXIV? +HC,22 LXV? +HC,25 LXVI? +HC,28 LXVII+HZ,1/32 ?

!+TL,1 Exposure time +8 s+9 ? +TC,16 100? +TC,19 100? +TC,22 100? +TC,25 100? +TC,28 300?

!Differentiation after processing? YES? YES? YES? YES? YES?

!between exposed and non-exposed?

!areas?

!R+HD s +L (+106 /square) of coated layer? 9.0 +33 ? 1.1 +33 ? 1.4 +33 ? 9.0 +33 ? 1.0 +33 ?

!before patterning? 10+HU 6? 10+HU 7? 10+HU 7? 10+HU 6? 10+HU 6?

!R+HD s +L (+106 /square) of large non-exposed? 1.7 +33 ? 1.5 +33 ? 1.2 +33 ? 5.5 +33 ? 3.5 +33 ?

!areas after processing and? 10+HU 7? 10+HU 6? 10+HU 5? 10+HU 14? 10+HU 14?

!conductivity upgrading?

!R+HD s +L (+106 /square) of exposed areas? 1.4 +33 ? 8.2 +33 ? 5.5 +33 ? 7.4 +33 ? 7.8 +33 ?

!after exposure, processing and? 10+HU 4? 10+HU 3? 10+HU 3? 10+HU 3? 10+HU 3?

!conductivity upgrading?

!R+HD s +L ratio non-exposed/exposed areas? 1.2 +33 ? 1.8 +33 ? 1.1 +33 ? 7.4 +33 ? 4.5

+33 ?

!after conductivity upgrading? 10+HU 3? 10+HU 2? 10+HU 2? 10+HU 10? 10+HU 10?

!Optical resolution of lines +8 +82 +9 ? +10 4? +10 4? +10 4? +10 4? +10 4?

!Optical resolution of spaces +8 +82 +9 ? +10 4? +10 4? +10 4? +10 4? +10 4?

!bubbles in large areas+48 ? no? no? no? no? yes+TZ,1/32 ?

!+PS

Item character count = 867

CWU Table Item #: 0500 (2 columns)

TABLE 27

| | SAMPLE | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| | LXXV | LXXVI | LXXVII | LXXVIII | LXXIX | LXXX |
| Support nr. | 1 | 1 | 1 | 3 | 3 | 3 |
| <u>LAYER 1 [g]</u> | | | | | | |
| 15.9% sol. NDP14 in water/ isopropanol (40/60 by vol.) | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 |
| 2% aq. sol. ZONYL FSO 100 deionized water | 0.5 48.87 | 0.5 48.87 | 0.5 48.87 | 0.5 48.87 | 0.5 48.87 | 0.5 48.87 |
| <u>OUTERMOST LAYER 2 [g]</u> | | | | | | |
| 1.2% aq. PEDOT/PSS disp. | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 |
| 2% aq. sol. ZONYL FSO 100 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 2.5% aqueous NH ₄ OH | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Z6040 | 0.07 | — | — | 0.07 | — | — |
| 15.9% sol. NDP14 in water/ isopropanol (40/60 by vol.) | — | 0.63 | 0.63 | — | 0.63 | 0.63 |
| N-methyl-pyrrolidinone | 2.5 | — | 2.5 | 2.5 | — | 2.5 |
| deionized water | 29.83 | 31.77 | 29.27 | 29.83 | 31.77 | 29.27 |
| pH | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| <u>COVERAGE [mg/m²]</u> | | | | | | |
| <u>LAYER 1</u> | | | | | | |
| NDP14 | 100 | 100 | 100 | 100 | 100 | 100 |
| ZONYL FSO 100 | 10 | 10 | 10 | 10 | 10 | 10 |
| <u>OUTERMOST LAYER 2 [mg/m²]</u> | | | | | | |
| PEDOT/PSS | 200 | 200 | 200 | 200 | 200 | 200 |
| 3-glycidoxypyrrol- trimethoxysilane | 70 | — | — | 70 | — | — |
| NDP14 | — | 100 | 100 | — | 100 | 100 |
| ZONYL FSO 100 | 10 | 10 | 10 | 10 | 10 | 10 |

+T2 TABLE 27+HZ,1/42

!+HC,16 +UZ,16/42 SAMPLE?

!+HL,1 ? +HC,16 LXXV? +HC,20 LXXVI? +HC,24 LXXVII? +HC,29 LXXVIII? +HC,34 LXXIX? +HC,38

LXXX+HZ,1/42 ?

!+TL,1 Support nr.? +TA,16 1? +TA,20 1? +TA,24 1? +TA,29 3? +TA,34 3? +TA,38 3?

!+UZ,1/7 LAYER 1 +8 g+9 ?

!15.9% sol. NDP14 in water/? 0.63? 0.63? 0.63? 0.63? 0.63? 0.63?

!isopropanol (40/60 by vol.)?

!2% aq. sol. ZONYL FSO 100? 0.5? 0.5? 0.5? 0.5? 0.5? 0.5?

DA: data54 — MD: 6/23/2003 — N: 5,790,513 — F: 05 — 7/18/2003 - 8:02:52 AM

11

!deionized water? 48.87? 48.87? 48.87? 48.87? 48.87? 48.87?
!+UZ,1/13 OUTERMOST LAYER 2 +8 g+9 ?
!1.2% aq. PEDOT/PSS disp.? 16.7? 16.7? 16.7? 16.7? 16.7? 16.7?
!2% aq. sol. ZONYL FSO 100? 0.5? 0.5? 0.5? 0.5? 0.5? 0.5?
!2.5% aqueous NH+HD 4+L OH? 0.4? 0.4? 0.4? 0.4? 0.4? 0.4?
!Z6040? 0.07? +TC +13 ? +TC +13 ? 0.07? +TC +13 ? +TC +13 ?
!15.9% sol. NDP14 in water/? +TC +13 ? +TA 0.63? +TA 0.63? +TC +13 ? +TA 0.63? +TA 0.63?
!isopropanol (40/60 by vol.)?
!N-methyl-pyrrolidinone? +TA 2.5? +TC +13 ? 2.5? +TA 2.5? +TC +13 ? 2.5?
!deionized water? 29.83? +TA 31.77? 29.27? 29.83? +TA 31.77? 29.27?
!pH? 3.4? 3.4? 3.4? 3.4? 3.4? 3.4?
!COVERAGE +8 mg/m+HU 2+L +9 ?
!+UZ,1/11 LAYER 1?
!NDP14? 100? 100? 100? 100? 100? 100?
!ZONYL FSO 100? 10? 10? 10? 10? 10? 10?
!+UZ,1/16 OUTERMOST LAYER 2 +8 mg/m+HU 2+L +9 ?
!PEDOT/PSS? 200? 200? 200? 200? 200? 200?
!3-glycidoxypropyl-? 70? +TC +13 ? +TC +13 ? 70? +TC +13 ? +TC +13 ?
!trimethoxysilane?
!NDP14? +TC +13 ? +TA 100? +TA 100? +TC +13 ? +TA 100? +TA 100?
!ZONYL FSO 100? +TA 10? 10? 10? +TA 10? 10? 10+TZ,1/42 ?
!+PS

Item character count = 1014

Folder character count = 6611

CWU Table Item #: 0511 (2 columns)

TABLE 28

| | SAMPLE | | | | | |
|--|--------------------------|---------------------------|--------------------------|---------------------------|----------------------------|----------------------------|
| | LXXV | LXXVI | LXXVII | LXXVIII | LXXIX | LXXX |
| Support nr. | 1 | 1 | 1 | 3 | 3 | 3 |
| R _s of non-exposed areas unrinsed with water [Ω/square] | 4.5 × 10 ³ | 1.7 × 10 ⁷ | 5.3 × 10 ³ | 4.9 × 10 ³ | 1.3 × 10 ⁷ | 4.0 × 10 ³ |
| R _s of non-exposed areas rinsed with water [Ω/square] | 3.7 × 10 ⁵ | >4.0 × 10 ⁷ | 6.3 × 10 ⁶ | 1.2 × 10 ¹³ | >4.0 × 10 ⁷ | 1.55 × 10 ¹³ |
| R _s of exposed areas rinsed with water [Ω/square] | 8.5 × 10 ³ | 3.4 × 10 ⁶ | 2.2 × 10 ⁴ | 3.0 × 10 ⁴ | 3.3 × 10 ⁶ | 1.3 × 10 ⁴ |
| R _s ratio of exposed areas to unexposed areas after processing with water | 43.5 | >11.8 | 2.9 | 4.0 × 10 ⁸ | >12.1 | 1.2 × 10 ⁹ |
| R _s (Ω/square) of large non-exposed areas after total processing including conductivity upgrading | — | 8.5 × 10 ¹² | — | — | 1.38 × 10 ¹³ | — |
| R _s (Ω/square) of exposed areas after exposure, processing and conductivity upgrading | — | 2.9 × 10 ⁴ | — | — | 4.5 × 10 ⁴ | — |
| R _s ratio of exposed areas to unexposed areas after processing and conductivity upgrading | — | 2.9 × 10 ⁸ | — | — | 3.1 × 10 ⁸ | — |
| Optical resolution [μm] | — | 6 | 6 | — | 6 | 6 |

+T2 TABLE 28+HZ,1/38

!+HC,12 +UZ,12/38 SAMPLE?

!+HC,12 LXXV? +HC,16 LXXVI? +HC,20 LXXVII? +HC,25 LXXVIII? +HC,30 LXXIX? +HC,34
LXXX+HZ,1/38 ?

!+TL,1 Support nr.? +TC,12 1? +TC,16 1? +TC,20 1? +TC,25 3? +TC,30 3? +TC,34 3?

!R+HD s +L of non-exposed areas? 4.5 +33 ? 1.7 +33 ? 5.3 +33 ? 4.9 +33 ? 1.3 +33 ? 4.0
+33 ?

!unrinsed with water? 10+HU 3? 10+HU 7? 10+HU 3? 10+HU 3? 10+HU 7? 10+HU 3?

!+8 +106 /square+9 ?

!R+HD s +L of non-exposed areas? 3.7 +33 ? +22 4.0 +33 ? 6.3 +33 ? 1.2 +33 ? +22 4.0 +33
? 1.55 +33 ?

!rinsed with water? 10+HU 5? 10+HU 7? 10+HU 6? 10+HU 13? 10+HU 7? 10+HU 13?

!+8 +106 /square+9 ?

!R+HD s +L of exposed areas? 8.5 +33 ? 3.4 +33 ? 2.2 +33 ? 3.0 +33 ? 3.3 +33 ? 1.3 +33
?

!rinsed with water? 10+HU 3? 10+HU 6? 10+HU 4? 10+HU 4? 10+HU 6? 10+HU 4?

!+8 +106 /square+9 ?

!R+HD s +L ratio of exposed? 43.5? +22 11.8? 2.9? 4.0 +33 ? +22 12.1? 1.2 +33 ?

!areas to unexposed? ? ? ? 10+HU 8? ? 10+HU 9?

2

!areas after processing?

!with water?

!R+HD s +L (+106 /square) of large? +13 ? 8.5 +33 ? +13 ? +13 ? 1.38 +33 ? +13 ?

!non-exposed areas after? ? 10+HU 12? ? ? 10+HU 13?

!total processing?

!including conductivity?

!upgrading?

!R+HD s +L (+106 /square) of? +13 ? 2.9 +33 ? +13 ? +13 ? 4.5 +33 ? +13 ?

!exposed areas after? ? 10+HU 4? ? ? 10+HU 4?

!exposure, processing?

!and conductivity?

!upgrading?

!R+HD s +L ratio of exposed? +13 ? 2.9 +33 ? +13 ? +13 ? 3.1 +33 ? +13 ?

!areas to unexposed? ? 10+HU 8? ? ? 10+HU 8?

!areas after processing?

!and conductivity?

!upgrading?

!Optical resolution +8 +82 m+9 ? +13 ? 6? 6? +13 ? 6? 6+TZ,1/38 ?

!+PS

Item character count = 1031

CWU Table Item #: 0551 (1 column)

TABLE 31

| | SAMPLE | | | | |
|-------------------------------------|---------|------|-------|-------|-------|
| | LXXXIX | XC | XCI | XCII | XCIII |
| <u>INGREDIENT [g]</u> | | | | | |
| 1,2% aq. PEDOT/PSS dispersion | 41.7 | 41.7 | 41.7 | 41.7 | 41.7 |
| 2% aq. sol. of ZONYL™ FSO 100 | 1 | 1 | 1 | 1 | 1 |
| N-methyl-pyrrolidinone | 5 | — | 5 | — | 5 |
| diethylene glycol | — | — | — | 5 | — |
| BADS01 | 0.25 | — | — | — | — |
| BADS02 | — | 0.25 | 0.25 | 0.25 | — |
| 1% ag. solution of BADS03 | — | — | — | — | 25 |
| deionized water | 51.15 | 57.0 | 52.05 | 52.05 | 26.4 |
| 2.5% aqueous NH ₄ OH | 0.9 | — | — | — | 0.9 |
| pH | 2.6-2.8 | — | — | — | 2.31 |
| <u>COVERAGE</u> | | | | | |
| PEDOT/PSS [mg/m ²] | 200 | 200 | 200 | 200 | 200 |
| BADS01 [mg/m ²] | 100 | — | — | — | — |
| BADS02 [mg/m ²] | — | 100 | 100 | 100 | — |
| BADS03 [mg/m ²] | — | — | — | — | 100 |
| ZONYL™ FSO 100 [mg/m ²] | 8 | 8 | 8 | 8 | 8 |

+T1 TABLE 31+HZ,1/32

DA: data54 — MD: 6/23/2003 — N: 5,790,513 — F: 06 — 7/18/2003 - 8:02:56 AM

3

!+HC,15 +UZ,15/32 SAMPLE?

!+HC,15 LXXXIX? +HC,20 XC? +HC,23 XCI? +HC,26 XCII? +HC,29 XCIII+HZ,1/32 ?

!+TL,1 +UZ,1/8 INGREDIENT +8 g+9 ? +TC,15 ? +TC,20 ? +TC,23 ? +TC,26 ? +TC,29 ?

!1,2% aq. PEDOT/PSS? 41.7? 41.7? 41.7? 41.7? 41.7?

!dispersion?

!2% aq. sol. of ZONYL+12 +198 +0 FSO? 1? 1? 1? 1? 1?

!100?

!N-methyl-pyrrolidinone? 5? +13 ? 5? +13 ? 5?

!diethylene glycol? +13 ? +13 ? +13 ? 5? +13 ?

!BADS01? 0.25? +13 ? +13 ? +13 ? +13 ?

!BADS02? +13 ? 0.25? 0.25? 0.25? +13 ?

!1% ag. solution of BADS03? +13 ? +13 ? +13 ? +13 ? 25?

!deionized water? 51.15? 57.0? 52.05? 52.05? 26.4?

!2.5% aqueous NH+HD 4+L OH? 0.9? +13 ? +13 ? +13 ? 0.9?

!pH? 2.6+14 2.8? +13 ? +13 ? +13 ? 2.31?

!+UZ,1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200?

!BADS01 +8 mg/m+HU 2+L +9 ? 100? +13 ? +13 ? +13 ? +13 ?

!BADS02 +8 mg/m+HU 2+L +9 ? +13 ? 100? 100? 100? +13 ?

!BADS03 +8 mg/m+HU 2+L +9 ? +13 ? +13 ? +13 ? +13 ? 100?

!ZONYL+12 +198 +0 FSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8? 8+TZ,1/32 ?

!+PS

Item character count = 618

CWU Table Item #: 0561 (1 column)

TABLE 32

| | SAMPLE | | | | |
|---|-----------------------|-------------------------|-----------------------|-----------------------|-----------------------|
| | LXXXIX | XC | XCI | XCII | XCIII |
| R _s of exposed layer untreated with water [Ω/square] | 1.6 × 10 ⁵ | 8.6 × 10 ⁶ | 4.6 × 10 ⁵ | 2.1 × 10 ⁵ | 3.7 × 10 ⁵ |
| R _s of exposed layer rinsed with water [Ω/square] | 6.1 × 10 ⁵ | 2.5 × 10 ^{14*} | 2.0 × 10 ⁸ | 4.6 × 10 ⁶ | 2.6 × 10 ⁶ |
| R _s of non-exposed layer unrinsed with water [Ω/square] | 1.2 × 10 ⁴ | 9.2 × 10 ⁵ | 5.3 × 10 ³ | 2.9 × 10 ⁵ | 1.4 × 10 ⁴ |
| R _s of non-exposed layer rinsed with water [Ω/square] | 1.6 × 10 ⁴ | 2.5 × 10 ^{14*} | 1.2 × 10 ⁴ | 2.1 × 10 ⁶ | 2.3 × 10 ⁴ |
| R _s ratio of exposed layer to unexposed layer after rinsing with water | 38 | 1.0 | 16,666 | 2.2 | 113 |

TABLE 32-continued

| SAMPLE | | | | |
|--------|----|-----|------|-------|
| LXXXIX | XC | XCI | XCII | XCIII |

*layer is completely removed when surface resistivity is $10^{14} \Omega/\text{square}$

+T1 TABLE 32+HZ,1/32

!+HC,11 +UZ,11/32 SAMPLE?

!+HC,11 LXXXIX? +HC,16 XC? +HC,20 XCI? +HC,24 XCII? +HC,28 XCIII+HZ,1/32 ?

!+TL,1 R+HD s +L of exposed layer? +TC,11 1.6 +33 ? +TC,16 8.6 +33 ? +TC,20 4.6 +33 ?

+TC,24 2.1 +33 ? +TC,28 3.7 +33 ?

!untreated with water? 10+HU 5? 10+HU 6? 10+HU 5? 10+HU 5? 10+HU 5?

!+8 +106 /square+9 ?

!R+HD s +L of exposed layer? 6.1 +33 ? 2.5 +33 ? 2.0 +33 ? 4.6 +33 ? 2.6 +33 ?

!rinsed with water? 10+HU 5? 10+HU 14*? 10+HU 8? 10+HU 6? 10+HU 6?

!+8 +106 /square+9 ?

!R+HD s +L of non-exposed? 1.2 +33 ? 9.2 +33 ? 5.3 +33 ? 2.9 +33 ? 1.4 +33 ?

!layer unrinsed with? 10+HU 4? 10+HU 5? 10+HU 3? 10+HU 5? 10+HU 4?

!water +8 +106 /square+9 ?

!R+HD s +L of non-exposed? 1.6 +33 ? 2.5 +33 ? 1.2 +33 ? 2.1 +33 ? 2.3 +33 ?

!layer rinsed with water? 10+HU 4? 10+HU 14*? 10+HU 4? 10+HU 6? 10+HU 4?

!+8 +106 /square+9 ?

!R+HD s +L ratio of exposed? 38? 1.0? 16,666? 2.2? 113?

!layer to unexposed?

!layer after rinsing with?

!water+TZ,1/32 ?

!+L6 *layer is completely removed when surface resistivity is 10+HU 14 +L +106 /square

!+PS

Item character count = 686

Folder character count = 2335

CWU Table Item #: 0281 (2 columns)

TABLE 1

| INGREDIENT [g] | SAMPLE | | | | | | |
|---------------------------------------|----------|-----|-----|-----|-----|-----|-----|
| | I (COMP) | II | III | IV | V | VI | VII |
| 1.2% aqueous dispersion of PEDOT/PSS | 417 | 417 | 417 | 417 | 417 | 417 | 417 |
| 0.25% aqueous solution of NDP01 | — | 100 | 250 | 500 | — | — | — |
| 0.25% aqueous solution of NDP02 | — | — | — | — | 100 | 250 | 500 |
| LATEX01 | 8.3 | — | — | — | — | — | — |
| 2% aqueous solution of ZONYL™ FSO 100 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| N-methyl-pyrrolidinone | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| deionized water | 514.7 | 423 | 273 | 23 | 423 | 423 | 423 |
| COVERAGE [mg/m ²] | | | | | | | |
| PEDOT/PSS | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| NDP01 | — | 10 | 25 | 50 | — | — | — |
| NDP02 | — | — | — | — | 10 | 25 | 50 |
| LATEX01 | 100 | — | — | — | — | — | — |
| ZONYL™ FSO 100 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |

+T2 TABLE 1+HZ,1/43

!+HC,20 +UZ,20/43 SAMPLE?

!+HC,20 I (COMP)? +HC,25 II? +HC,28 III? +HC,31 IV? +HC,34 V? +HC,37 VI? +HC,40 VII+HZ,1/43 ?

!+TL,1 +UZ,1/9 INGREDIENT +8 g+9 ? +TA,20 ? +TA,25 ? +TA,28 ? +TA,31 ? +TA,34 ? +TA,37 ? +TA,40 ?

!1.2% aqueous dispersion of PEDOT/PSS? 417? 417? 417? 417? 417? 417? 417?

!0.25% aqueous solution of NDP01? +13 ? 100? 250? 500? +13 ? +13 ? +13 ?

!0.25% aqueous solution of NDP02? +13 ? +13 ? +13 ? +13 ? 100? 250? 500?

!LATEX01? 8.3? +13 ? +13 ? +13 ? +13 ? +13 ? +13 ?

!2% aqueous solution of ZONYL+12 +198 +0 FSO 100? 10? 10? 10? 10? 10? 10? 10?

!N-methyl-pyrrolidinone? 50? 50? 50? 50? 50? 50? 50?

!deionized water? 514.7? 423? 273? 23? 423? 423? 423?

!+UZ,1/11 COVERAGE +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200? 200? 200? 200?

!NDP01? +13 ? 10? 25? 50? +13 ? +13 ? +13 ?

!NDP02? +13 ? +13 ? +13 ? +13 ? 10? 25? 50?

!LATEX01? 100? +13 ? +13 ? +13 ? +13 ? +13 ? +13 ?

!ZONYL+12 +198 +0 FSO 100? 8? 8? 8? 8? 8? 8? 8+TZ,1/43 ?

!+PS

Item character count = 604

TABLE 2

| PROPERTY | SAMPLE | | | | | | |
|---|----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | I (COMP) | II | III | IV | V | VI | VII |
| R _s differentiation between exposed and non-exposed areas after processing | no | yes | yes | yes | yes | yes | yes |
| R _s (Ω /square) of coated layer before patterning | 730 | 760 | 650 | 980 | 490 | 620 | 1500 |
| R _s (Ω /square) of the non-exposed areas after exposure and processing | — | 5×10^4 | 5×10^4 | 5×10^4 | 5×10^4 | 5×10^4 | 5×10^4 |
| R _s (Ω /square) of the non-exposed areas after exposure and thorough rubbing during processing | — | $>10^{10}$ | $>10^{10}$ | $>10^{10}$ | $>10^{10}$ | $>10^{10}$ | $>10^{10}$ |
| R _s (Ω /square) of the exposed areas after exposure and processing | 730 | 850 | 650 | 960 | 480 | 630 | 1500 |

+T2 TABLE 2+HZ,1/44

!+HC,15 +UZ,15/44 SAMPLE?

!+HL,1 PROPERTY? +HC,15 I (COMP)? +HC,20 II? +HC,24 III? +HC,28 IV? +HC,32 V? +HC,36 VI? +HC,40 VII+HZ,1/44 ?

!+TL,1 R+HD s +L differentiation between? +TC,15 no? +TC,20 yes? +TC,24 yes? +TC,28 yes? +TC,32 yes? +TC,36 yes? +TC,40 yes?

!exposed and non-exposed areas?

!after processing?

!R+HD s +L (+106 /square) of coated layer? 730? 760? 650? 980? 490? 620? 1500?

!before patterning?

!R+HD s +L (+106 /square) of the non-? +13 ? 5 +33 +0 10+HU 4? 5 +33 +0 10+HU 4? 5 +33 +0 10+HU 4? 5 +33 +0 10+HU 4? 5 +33 +0 10+HU 4? 5 +33 +0 10+HU 4?

!exposed areas after exposure?

!and processing?

!R+HD s +L (+106 /square) of the non-? +13 ? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10?

!exposed areas after exposure?

!and thorough rubbing during?

!processing?

!R+HD s +L (+106 /square) of the exposed? 730? 850? 650? 960? 480? 630? 1500?

!areas after exposure and?

!processing+TZ,1/44 ?

!+PS

3

CWU Table Item #: 0300 (2 columns)

TABLE 3

| <u>composition of the coating dispersions</u> | | | | | | | |
|--|---------------|-----|-----|-----|------|------|------|
| | <u>SAMPLE</u> | | | | | | |
| | VIII (COMP) | IX | X | XI | XII | XIII | XIV |
| INGREDIENT [g] | | | | | | | |
| 1.2% aq. PEDOT/PSS dispersion | 417 | 417 | 417 | 417 | 417 | 417 | 417 |
| 17% solution of NDP03 in isopropanol/water (60/40) | — | 1.5 | 3.7 | 7.1 | 14.2 | 28.4 | 56.8 |
| LATEX01 | 8.3 | — | — | — | — | — | — |
| 2% aq. sol. ZONYL™ FSO 100 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| N-methyl-pyrrolidinone | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| deionized water | 514.7 | 522 | 519 | 516 | 509 | 495 | 466 |
| COVERAGE | | | | | | | |
| PEDOT/PSS [mg/m ²] | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| NDP03 [mg/m ²] | — | 10 | 25 | 50 | 100 | 200 | 400 |
| LATEX01 [mg/m ²] | 100 | — | — | — | — | — | — |
| ZONYL™ FSO 100 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |

+T2 TABLE 3+HZ,1/43

!+HC,1 +UZ,14/30 composition of the coating dispersions?

!+HC,16 +UZ,16/43 SAMPLE?

!+HC,16 VIII (COMP)? +HC,23 IX? +HC,26 X? +HC,29 XI? +HC,34 XII? +HC,37 XIII? +HC,40 XIV+HZ,1/43 ?

!+TL,1 INGREDIENT +8 g+9 ? +TA,16 ? +TA,23 ? +TA,26 ? +TA,29 ? +TA,34 ? +TA,37 ? +TA,40 ?

!1.2% aq. PEDOT/PSS dispersion? 417? 417? 417? 417? 417? 417? 417?

!17% solution of NDP03 in? +13 ? 1.5? 3.7? 7.1? 14.2? 28.4? 56.8?

!isopropanol/water (60/40)?

!LATEX01? 8.3? +13 ? +13 ? +13 ? +13 ? +13 ? +13 ?

!2% aq. sol. ZONYL+12 +198 +0 FSO 100? 10? 10? 10? 10? 10? 10? 10?

!N-methyl-pyrrolidinone? 50? 50? 50? 50? 50? 50? 50?

!deionized water? 514.7? 522? 519? 516? 509? 495? 466?

!+UZ,1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200? 200? 200?

!NDP03 +8 mg/m+HU 2+L +9 ? +13 ? 10? 25? 50? 100? 200? 400?

!LATEX01 +8 mg/m+HU 2+L +9 ? 100? +13 ? +13 ? +13 ? +13 ? +13 ? +13 ?

!ZONYL+12 +198 +0 FSO 100? 8? 8? 8? 8? 8? 8? 8+TZ,1/43 ?

!+PS

Item character count = 611

CWU Table Item #: 0301 (2 columns)

TABLE 4

| property | VIII (COMP) | IX | X | XI | XII | XIII | XIV |
|--|-------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| R _s differentiation between exposed and non-exposed areas after processing | no | yes | yes | yes | yes | yes | yes |
| R _s (Ω/square) of coated layer before patterning | 760 | 689 | 739 | 790 | 1100 | 1600 | 5500 |
| R _s (Ω/square) of the non-exposed areas after exposure and processing | — | >10 ⁵ | >10 ⁵ | >10 ⁵ | >10 ⁵ | >10 ⁵ | >10 ⁵ |
| R _s (Ω/square) of the non-exposed areas after exposure and thorough rubbing during processing | — | >10 ¹⁰ | >10 ¹⁰ | >10 ¹⁰ | >10 ¹⁰ | >10 ¹⁰ | >10 ¹⁰ |
| R _s (Ω/square) of exposed areas after exposure and processing | 760 | 1344 | 1375 | 1360 | 2100 | 2400 | 22000 |

+T2 TABLE 4+HZ,1/39

!+HL,1 property? +HC,13 VIII (COMP)? +HC,20 IX? +HC,23 X? +HC,26 XI? +HC,29 XII? +HC,32 XIII? +HC,35 XIV+HZ,1/39 ?

!+TL,1 R+HD s +L differentiation between? +TC,13 no? +TC,20 yes? +TC,23 yes? +TC,26 yes? +TC,29 yes? +TC,32 yes? +TC,35 yes?

!exposed and non-exposed?

!areas after processing?

!R+HD s +L (+106 /square) of coated? 760? +11 689? +11 739? +11 790? 1100? 1600? +11 5500?

!layer before patterning?

!R+HD s +L (+106 /square) of the non-? +13 ? +22 10+HU 5? +22 10+HU 5? +22 10+HU 5? +22 10+HU 5? +22 10+HU 5? +22 10+HU 5?

!exposed areas after?

!exposure and processing?

!R+HD s +L (+106 /square) of the non-? +13 ? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10? +22 10+HU 10?

!exposed areas after?

!exposure and thorough?

!rubbing during processing?

!R+HD s +L (+106 /square) of exposed? 760? 1344? 1375? 1360? 2100? 2400? 22000?

!areas after exposure and?

!processing+TZ,1/39 ?

!+PS

Item character count = 623

TABLE 5

| composition of the coating dispersions | | | | | | | | | | |
|--|-----|-----|------|-------|-----|-----|-----|------|-------|------|
| SAMPLE | | | | | | | | | | |
| | XV | XVI | XVII | XVIII | XIX | XX | XXI | XXII | XXIII | XXIV |
| INGREDIENT [g] | | | | | | | | | | |
| Support nr. | 1 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1.2% aqueous dispersion of PEDOT/PSS | 417 | 417 | 417 | 417 | 417 | 417 | 417 | 417 | 417 | 417 |
| 17.8% aq. sol. of NDP04 | 7 | 14 | 21 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 2% aqueous solution of ZONYL™ FSO 100 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| N-methyl-pyrrolidinone | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| deionized water | 516 | 509 | 502 | 509 | 509 | 509 | 509 | 509 | 509 | 509 |
| COVERAGE | | | | | | | | | | |
| PEDOT/PSS [mg/m ²] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| NDP04 [mg/m ²] | 50 | 100 | 150 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| ZONYL FSO 100 [mg/m ²] | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |

+T2 TABLE 5+HZ,1/46

!+HC,1 +UZ,15/32 composition of the coating dispersions?

!+HC,13 +UZ,13/46 SAMPLE?

!+HC,13 XV? +HC,16 XVI? +HC,19 XVII? +HC,22 XVIII? +HC,26 XIX? +HC,29 XX? +HC,32 XXI?

+HC,35 XXII? +HC,38 XXIII? +HC,42 XXIV+HZ,1/46 ?

!+TL,1 INGREDIENT +8 g+9 ? +TA,13 ? +TA,16 ? +TA,19 ? +TA,22 ? +TA,26 ? +TA,29 ? +TA,32

? +TA,35 ? +TA,38 ? +TA,42 ?

!Support nr.? 1? 1? 1? 2? 3? 4? 5? 6? 7? 8?

!1.2% aqueous dispersion? 417? 417? 417? 417? 417? 417? 417? 417? 417?

!of PEDOT/PSS?

!17.8% aq. sol. of NDP04? 7? 14? 21? 14? 14? 14? 14? 14? 14?

!2% aqueous solution of? 10? 10? 10? 10? 10? 10? 10? 10? 10?

!ZONYL+12 +198 +0 FSO 100?

!N-methyl-pyrrolidinone? 50? 50? 50? 50? 50? 50? 50? 50? 50?

!deionized water? 516? 509? 502? 509? 509? 509? 509? 509? 509?

!+UZ,1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200? 200? 200? 200?

!NDP04 +8 mg/m+HU 2+L +9 ? 50? 100? 150? 100? 100? 100? 100? 100?

!ZONYL FSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8? 8? 8? 8? 8? 8+TZ,1/46 ?

!+PS

Item character count = 679

TABLE 6

| PROPERTY | SAMPLE | | | | | | | | | |
|--|-------------------|-------------------|-------------------|----------------------|----------------------|-------------------|----------------------|-------------------|-------------------|-------------------|
| | XV | XVI | XVII | XVIII | XIX | XX | XXI | XXII | XXIII | XXIV |
| Support nr | 1 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| R_s (Ω /square) of coated layer before patterning | 1.7×10^3 | 5.2×10^3 | 1.5×10^4 | 3.8×10^3 | 3.8×10^3 | 1.8×10^5 | 4.1×10^3 | 2.5×10^5 | 4.0×10^3 | 9.7×10^3 |
| R_s (Ω /square) of non-exposed areas after exposure and processing | 2.4×10^5 | 4.2×10^5 | 6.3×10^5 | 6.5×10^{12} | 6.2×10^{12} | 9.9×10^8 | 3.8×10^{12} | 9.0×10^6 | 9.6×10^5 | 1.1×10^5 |
| R_s (Ω /square) of exposed areas after exposure | — | 7.2×10^3 | — | 5.6×10^3 | 6.1×10^3 | 2.4×10^5 | 6.1×10^3 | 3.4×10^5 | 6.9×10^3 | 2.2×10^4 |
| R_s (Ω /square) of exposed areas after exposure and processing | 4.8×10^4 | 1.6×10^4 | 1.5×10^5 | 1.2×10^4 | 1.2×10^4 | 1.0×10^6 | 1.1×10^4 | 1.2×10^6 | 4.8×10^5 | 5.1×10^4 |
| R_s ratio non-exposed/exposed areas | 5 | 26.3 | 4.2 | 5×10^8 | 5×10^8 | 990 | 4×10^8 | 7.5 | 2.0 | 2.2 |

+T2 TABLE 6+HZ,1/64

!+HC,12 +UZ,12/64 SAMPLE?

!+HL,1 PROPERTY? +HC,12 XV? +HC,17 XVI? +HC,22 XVII? +HC,28 XVIII? +HC,33 XIX? +HC,38 XX? +HC,43 XXI? +HC,48 XXII? +HC,54 XXIII? +HC,59 XXIV+HZ,1/64 ?

!+TL,1 Support nr? +TC,12 1? +TC,17 1? +TC,22 1? +TC,28 2? +TC,33 3? +TC,38 4? +TC,43 5? +TC,48 6? +TC,54 7? +TC,59 8?

!R+HD s +L (+106 /square) of? 1.7 +33 +0 10+HU 3? 5.2 +33 +0 10+HU 3? 1.5 +33 +0 10+HU 4? 3.8 +33 +0 10+HU 3+11 ? 3.8 +33 +0 10+HU 3+11 ? 1.8 +33 +0 10+HU 5? 4.1 +33 +0 10+HU 3+11 ? 2.5 +33 +0 10+HU 5? 4.0 +33 +0 10+HU 3? 9.7 +33 +0 10+HU 3?

!coated layer before?

!patterning?

!R+HD s +L (+106 /square) of? 2.4 +33 +0 10+HU 5? 4.2 +33 +0 10+HU 5? 6.3 +33 +0 10+HU 5? 6.5 +33 +0 10+HU 12? 6.2 +33 +0 10+HU 12? 9.9 +33 +0 10+HU 8? 3.8 +33 +0 10+HU 12? 9.0 +33 +0 10+HU 6? 9.6 +33 +0 10+HU 5? 1.1 +33 +0 10+HU 5?

!non-exposed areas?

!after exposure and?

!processing?

!R+HD s +L (+106 /square) of? +13 ? 7.2 +33 +0 10+HU 3? +13 ? 5.6 +33 +0 10+HU 3+11 ? 6.1 +33 +0 10+HU 3+11 ? 2.4 +33 +0 10+HU 5? 6.1 +33 +0 10+HU 3+11 ? 3.4 +33 +0 10+HU 5? 6.9 +33 +0 10+HU 3? 2.2 +33 +0 10+HU 4?

!exposed areas after?

!exposure?

!R+HD s +L (+106 /square) of? 4.8 +33 +0 10+HU 4? 1.6 +33 +0 10+HU 4? 1.5 +33 +0 10+HU 5? 1.2 +33 +0 10+HU 4+11 ? 1.2 +33 +0 10+HU 4+11 ? 1.0 +33 +0 10+HU 6? 1.1 +33 +0 10+HU 4+11 ? 1.2 +33 +0 10+HU 6? 4.8 +33 +0 10+HU 5? 5.1 +33 +0 10+HU 4?

!exposed areas after?

!exposure and processing?

!R+HD s +L ratio non-? 5? 26.3? 4.2? +11 +12 5 +33 +0 10+HU 8+11 ? +11 +12 5 +33 +0 10+HU
8+11 ? 990? +11 +12 4 +33 +0 10+HU 8+11 ? 7.5? 2.0? 2.2?

!exposed/exposed areas+TZ,1/64 ?

!+PS

Item character count = 910

CWU Table Item #: 0400 (2 columns)

TABLE 15

| | SAMPLE | | | | | | |
|--|--------|-------|-------|-------|--------|-------|-------|
| | XLIV | XLV | XLVI | XLVII | XLVIII | XLIX | L |
| INGREDIENT [g] | | | | | | | |
| 1.2% aqueous dispersion of PEDOT/PSS | 41.7 | 41.7 | 41.7 | 41.7 | 41.7 | 41.7 | 41.7 |
| 2% aqueous solution of ZONYL™ FSO 100 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| N-methyl-pyrrolidinone | — | — | — | — | — | — | — |
| BADS01 | — | 0.125 | 0.25 | 0.25 | 0.375 | 0.50 | — |
| BADS02 | — | — | — | — | — | — | 0.25 |
| deionized water | 57.30 | 57.18 | 57.05 | 57.05 | 56.93 | 56.80 | 57.05 |
| COVERAGE | | | | | | | |
| PEDOT/PSS [mg/m ²] | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| BADS01 [mg/m ²] | — | 50 | 100 | 100 | 150 | 200 | 100 |
| % by weight of BADS01 w.r.t. PEDOT/PSS | 0 | 25 | 50 | 50 | 75 | 100 | — |
| ZONYL™ FSO 100 [mg/m ²] | 8 | 8 | 8 | 8 | 8 | 8 | 8 |

+T2 TABLE 15+HZ,1/42

!+HC,14 +UZ,14/42 SAMPLE?

!+HC,14 XLIV? +HC,18 XLV? +HC,22 XLVI? +HC,26 XLVII? +HC,30 XLVIII? +HC,34 XLIX? +HC,38
L+HZ,1/42 ?

!+TL,1 INGREDIENT +8 g+9 ? +TA,14 ? +TA,18 ? +TA,22 ? +TA,26 ? +TA,30 ? +TA,34 ? +TA,38
?

!1.2% aqueous dispersion? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7?

!of PEDOT/PSS?

!2% aqueous solution of? 1? 1? 1? 1? 1? 1? 1?

!ZONYL+12 +198 +0 FSO 100?

!N-methyl-pyrrolidinone? +13 ? +13 ? +13 ? +13 ? +13 ? +13 ? +13 ?

!BADS01? +13 ? 0.125? 0.25? 0.25? 0.375? 0.50? +13 ?

!BADS02? +13 ? +13 ? +13 ? +13 ? +13 ? +13 ? 0.25?

!deionized water? 57.30? 57.18? 57.05? 57.05? 56.93? 56.80? 57.05?

!+UZ,1/7 COVERAGE?

!PEDOT/PSS +8 mg/m+HU 2+L +9 ? 200? 200? 200? 200? 200? 200? 200?

!BADS01 +8 mg/m+HU 2+L +9 ? +13 ? 50? 100? 100? 150? 200? 100?

!% by weight of BADS01? 0? 25? 50? 50? 75? 100? +13 ?

!w.r.t. PEDOT/PSS?

!ZONYL+12 +198 +0 FSO 100 +8 mg/m+HU 2+L +9 ? 8? 8? 8? 8? 8? 8? 8+TZ,1/42 ?

!+PS

Item character count = 592

CWU Table Item #: 0411 (2 columns)

TABLE 16

| | SAMPLE | | | | | | |
|--|-----------------------|-----------------------|--|--|------------------------|------------------------|------------------------|
| | XLIV | XLV | XLVI | XLVII | XLVIII | XLIX | L |
| BADS01 [mg/m ²] | — | 50 | 100 | 100 | 150 | 200 | — |
| R _s of non-exposed layer untreated with water [Ω/square] | 3.3 × 10 ⁶ | 1.5 × 10 ⁶ | 6.2 × 10 ⁴ | 4.5 × 10 ⁴ | 6.9 × 10 ³ | 1.1 × 10 ⁴ | 2.7 × 10 ⁶ |
| R _s of non-exposed layer rinsed with water [Ω/square] | 4.7 × 10 ⁸ | 1.1 × 10 ⁹ | 1 × 10 ¹² / 1.3 × 10 ¹⁴ | 5.0 × 10 ¹² / 7.3 × 10 ¹³ | 1.0 × 10 ¹³ | 1.4 × 10 ¹⁴ | 2.5 × 10 ¹⁴ |
| R _s of exposed layer untreated with water [Ω/square] | 3.0 × 10 ⁶ | 1.1 × 10 ⁶ | 1.7 × 10 ⁵ | 9.0 × 10 ⁴ | 2.6 × 10 ⁴ | 3.7 × 10 ⁴ | 1.0 × 10 ⁷ |
| R _s of exposed layer rinsed with water [Ω/square] | 3.5 × 10 ⁸ | 9.7 × 10 ⁵ | 1.5 × 10 ⁵ | 9.9 × 10 ⁴ | 4.1 × 10 ⁴ | 4.1 × 10 ⁴ | 3.6 × 10 ⁸ |
| ratio of exposed layer to unexposed layer after rinsing with water | 1.3 | 1134 | 7 × 10 ⁶ / 9 × 10 ⁸ | 5 × 10 ⁷ / 7.3 × 10 ⁹ | 2.4 × 10 ⁸ | 3.4 × 10 ⁹ | 6.9 × 10 ⁶ |
| R _s of exposed layer after rinsing with water [Ω/square] and conductivity enhancement | — | 1.4 × 10 ³ | 1.6 × 10 ³ | 1.7 × 10 ³ | 3.3 × 10 ³ | 2.7 × 10 ³ | 1.0 × 10 ⁶ |

+T2 TABLE 16+HZ,1/49

!+HC,12 +UZ,12/49 SAMPLE?

!+HC,12 XLIV? +HC,17 XLV? +HC,22 XLVI? +HC,28 XLVII? +HC,34 XLVIII? +HC,39 XLIX? +HC,44

L+HZ,1/49 ?

!+TL,1 BADS01 +8 mg/m+HU 2+L +9 ? +TC,12 +13 ? +TC,17 50? +TC,22 100? +TC,28 100? +TC,34 150? +TC,39 200? +TC,44 +13 ?

!R+HD s +L of non-exposed layer? 3.3 +33 +0 10+HU 6? 1.5 +33 +0 10+HU 6? 6.2 +33 +0 10+HU 4+11 +L +12 ? 4.5 +33 +0 10+HU 4+11 +L +12 ? 6.9 +33 +0 10+HU 3+11 ? 1.1 +33 +0 10+HU 4+11 ? 2.7 +33 +0 10+HU 6+11 ?

!untreated with water?

!+8 +106 /square+9 ?

!R+HD s +L of non-exposed layer? 4.7 +33 +0 10+HU 8? 1.1 +33 +0 10+HU 9? +11 +12 1 +33 +0 10+HU 12+L /? 5.0 +33 +0 10+HU 12+L /? 1.0 +33 +0 10+HU 13? 1.4 +33 +0 10+HU 14? 2.5 +33 +0 10+HU 14?

!rinsed with water? ? ? 1.3 +33 +0 10+HU 14+L +12 ? 7.3 +33 +0 10+HU 13+L +12 ?

DA: data54 — MD: 6/23/2003 — N: 5,790,513 — F: 07 — 7/18/2003 - 8:03:00 AM

9

!+8 +106 /square+9 ?

!R+HD s +L of exposed layer? 3.0 +33 +0 10+HU 6? 1.1 +33 +0 10+HU 6? 1.7 +33 +0 10+HU
5+11 +L +12 ? 9.0 +33 +0 10+HU 4+11 +L +12 ? 2.6 +33 +0 10+HU 4+11 ? 3.7 +33 +0 10+HU
4+11 ? 1.0 +33 +0 10+HU 7+11 ?

!untreated with water?

!+8 +106 /square+9 ?

!R+HD s +L of exposed layer? 3.5 +33 +0 10+HU 8? 9.7 +33 +0 10+HU 5? 1.5 +33 +0 10+HU
5+11 +L +12 ? 9.9 +33 +0 10+HU 4+11 +L +12 ? 4.1 +33 +0 10+HU 4+11 ? 4.1 +33 +0 10+HU
4+11 ? 3.6 +33 +0 10+HU 8+11 ?

!rinsed with water?

!+8 +106 /square+9 ?

!ratio of exposed layer? 1.3? 1134? +11 +12 7 +33 +0 10+HU 6+L /+HU +11 ? +11 +12 5 +33
+0 10+HU 7+L /+HU +11 ? 2.4 +33 +0 10+HU 8+11 ? 3.4 +33 +0 10+HU 9+11 ? 6.9 +33 +0 10+HU
6+11 ?

!to unexposed layer? ? ? +11 +12 9 +33 +0 10+HU 8+11 +L +12 ? 7.3 +33 +0 10+HU 9+11 +L
+12 ?

!after rinsing with?

!water?

!R+HD s +L of exposed layer? +13 ? 1.4 +33 +0 10+HU 3? 1.6 +33 +0 10+HU 3+11 +L +12 ?
1.7 +33 +0 10+HU 3+11 +L +12 ? 3.3 +33 +0 10+HU 3+11 ? 2.7 +33 +0 10+HU 3+11 ? 1.0 +33
+0 10+HU 6+11 ?

!after rinsing with?

!water +8 +106 /square+9 +0 and?

!conductivity?

!enhancement+TZ,1/49 ?

!+PS

Item character count = 1064

CWU Table Item #: 0490 (2 columns)

TABLE 25

| | SAMPLE | | | | | | |
|--|--------|------|-----|------|-------|--------|-------|
| | LXVIII | LXIX | LXX | LXXI | LXXII | LXXIII | LXXIV |
| Support nr. LAYER 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 |
| NDP04 [mg/m ²] OUTERMOST LAYER 2 [mg/m ²] | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

TABLE 25-continued

| | SAMPLE | | | | | | |
|------------------------|--------|------|------|------|-------|--------|-------|
| | LXVIII | LXIX | LXX | LXXI | LXXII | LXXIII | LXXIV |
| PEDOT/PSS | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Z6040 | 200 | 70 | — | — | 200 | 70 | — |
| NDP04 | — | — | — | 100 | — | — | 100 |
| N-methyl-pyrrolidinone | 2500 | 2500 | 2500 | — | 2500 | 2500 | 2500 |

+T2 TABLE 25+HZ,1/41

!+HC,16 +UZ,16/41 SAMPLE?

!+HC,16 LXVIII? +HC,20 LXIX? +HC,23 LXX? +HC,26 LXXI? +HC,29 LXXII? +HC,33 LXXIII?

+HC,37 LXXIV+HZ,1/41 ?

!+TL,1 Support nr.? +TA,16 1? +TA,20 1? +TA,23 1? +TA,26 1? +TA,29 3? +TA,33 3? +TA,37 3?

!+UZ,1/6 LAYER 1?

!NDP04 +8 mg/m+HU 2+L +9 ? 100? 100? 100? 100? 100? 100? 100?

!+UZ,1/16 OUTERMOST LAYER 2 +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200? 200? 200? 200?

!Z6040? 200? 70? +13 ? +13 ? 200? 70? +13 ?

!NDP04? +13 ? +13 ? +13 ? 100? +13 ? +13 ? 100?

!N-methyl-pyrrolidinone? 2500? 2500? 2500? +13 ? 2500? 2500? 2500+TZ,1/41 ?

!+PS

Item character count = 339

CWU Table Item #: 0491 (2 columns)

TABLE 26

| | SAMPLE | | | | | | |
|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| | LXVIII | LXIX | LXX | LXXI | LXXII | LXXIII | LXXIV |
| Support nr. | 1 | 1 | 1 | 1 | 3 | 3 | 3 |
| Exposure times [s] | 100 | 150 | 150 | 100 | 100 | 150 | 150 |
| R _s of non-exposed areas unrinsed with water [Ω/square] | 1.2 × 10 ⁴ | 4.2 × 10 ³ | 6.0 × 10 ³ | 2.6 × 10 ⁷ | 1.5 × 10 ⁴ | 3.0 × 10 ³ | 3.2 × 10 ⁵ |
| R _s of non-exposed areas rinsed with water [Ω/square] | 6.2 × 10 ¹² | >4.0 × 10 ⁷ | >4.0 × 10 ⁷ | 3.2 × 10 ¹³ | 4.6 × 10 ¹² | >4.0 × 10 ⁷ | 1.2 × 10 ¹³ |
| R _s of exposed areas rinsed with water [Ω/square] | 1.1 × 10 ⁵ | 2.7 × 10 ⁴ | 3.0 × 10 ⁴ | 1.13 × 10 ⁷ | 1.5 × 10 ⁵ | 2.1 × 10 ³ | 1.0 × 10 ⁵ |
| R _s ratio of exposed areas to unexposed areas after rinsing with water | 5.6 × 10 ⁷ | >1.5 × 10 ³ | >1.3 × 10 ³ | 2.8 × 10 ⁶ | 3.1 × 10 ⁷ | >1.9 × 10 ⁴ | 1.2 × 10 ⁸ |
| Resolution [μm] | — | 6 | — | 6 | 10 | — | 6 |

+T2 TABLE 26+HZ,1/48

DA: data54 — MD: 6/23/2003 — N: 5,790,513 — F: 07 — 7/18/2003 - 8:03:00 AM

11

!+HC,12 +UZ,12/48 SAMPLE?

!+HC,12 LXVIII? +HC,17 LXIX? +HC,22 LXX? +HC,27 LXXI? +HC,33 LXXII? +HC,38 LXXIII?
+HC,43 LXXIV+HZ,1/48 ?

!+TL,1 Support nr.? +TC,12 +10 1? +TC,17 +10 1? +TC,22 +10 1? +TC,27 +10 1? +TC,33 +10
3? +TC,38 +10 3? +TC,43 +10 3?

!Exposure times +8 s+9 ? 100? 150? 150? 100? 100? 150? 150?

!R+HD s +L of non-exposed areas? 1.2 +33 +0 10+HU 4+11 ? +11 4.2 +33 +0 10+HU 3? +11 6.0
+33 +0 10+HU 3? 2.6 +33 +0 10+HU 7+11 ? 1.5 +33 +0 10+HU 4+11 ? +11 3.0 +33 +0 10+HU 3?
3.2 +33 +0 10+HU 5+11 ?

!unrinsed with water?

!+8 +106 /square+9 ?

!R+HD s +L of non-exposed areas? 6.2 +33 +0 10+HU 12? +22 4.0 +33 +0 10+HU 7? +22 4.0
+33 +0 10+HU 7? 3.2 +33 +0 10+HU 13? 4.6 +33 +0 10+HU 12? +22 4.0 +33 +0 10+HU 7? 1.2
+33 +0 10+HU 13?

!rinsed with water?

!+8 +106 /square+9 ?

!R+HD s +L of exposed areas? 1.1 +33 +0 10+HU 5+11 ? +11 2.7 +33 +0 10+HU 4? +11 3.0 +33
+0 10+HU 4? 1.13 +33 +0 10+HU 7+11 +L +11 ? 1.5 +33 +0 10+HU 5+11 ? +11 2.1 +33 +0 10+HU
3? 1.0 +33 +0 10+HU 5+11 ?

!rinsed with water?

!+8 +106 /square+9 ?

!R+HD s +L ratio of exposed? 5.6 +33 +0 10+HU 7+11 ? +22 1.5 +33 +0 10+HU 3? +22 1.3 +33
+0 10+HU 3? 2.8 +33 +0 10+HU 6+11 ? 3.1 +33 +0 10+HU 7+11 ? +22 1.9 +33 +0 10+HU 4? 1.2
+33 +0 10+HU 8+11 ?

!areas to unexposed?

!areas after rinsing?

!with water?

!Resolution +8 +82 m+9 ? +13 ? +10 6? +13 ? +10 6? +11 10 ? +13 ? +10 6+TZ,1/48 ?

!+PS

Item character count = 786

Folder character count = 6846

1

CWU Table Item #: 0530 (2 columns)

TABLE 29

| INGREDIENT [g] | SAMPLE | | | | | | | |
|-----------------------------------|-----------------|--------|---------|--------|-------|--------|---------|----------|
| | LXXXI (COMP) | LXXXII | LXXXIII | LXXXIV | LXXXV | LXXXVI | LXXXVII | LXXXVIII |
| 1.2% aq. PEDOT/PSS dispersion | 41.7 | 41.7 | 41.7 | 41.7 | 41.7 | 41.7 | 41.7 | 41.7 |
| 2% aq. solution of ZONYL™ FSO 100 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| N-methyl-pyrrolidinone | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| BADS02 | 0 | 0.025 | 0.0625 | 0.125 | — | 0.25 | 0.25 | 0.5 |
| 1% aq. sol. BADS02 | — | — | — | — | 21.8 | — | — | — |
| deionized water | 51.02 | 51.00 | 50.96 | 50.90 | 21.5 | 50.99 | 51.15 | 51.12 |
| 2.5% aqueous NH ₄ OH | 1.28 | 1.28 | 1.28 | 1.28 | 9.0 | 1.06 | 0.9 | 0.68 |
| pH | 3.41 | 3.3 | 3.17 | 3.45 | 3.26 | 3.53 | 2.6-2.8 | 3.55 |
| COVERAGE [mg/m ²] | | | | | | | | |
| PEDOT/PSS | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| BADS02 | 0 | 10 | 25 | 50 | 87* | 100 | 100 | 200 |
| ZONYL™ FSO 100 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |

*2.0 × 10⁻⁴ mol/m²

+T2 TABLE 29+HZ,1/52

!+HC,11 +UZ,11/52 SAMPLE?

!+HC,11 LXXXI? +HC,16 ? +HC,21 ? +HC,26 ? +HC,31 ? +HC,36 ? +HC,41 ? +HC,46 ?

!(COMP)? LXXXII? LXXXIII? LXXXIV? LXXXV? LXXXVI? LXXXVII? LXXXVIII+HZ,1/52 ?

!+TL,1 +UZ,1/9 INGREDIENT +8 g+9 ? +TA,11 ? +TA,16 ? +TA,21 ? +TA,26 ? +TA,31 ? +TA,36 ? +TA,41 ? +TA,46 ?

!1.2% aq. PEDOT/PSS? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7? 41.7?

!dispersion?

!2% aq. solution of? 1? 1? 1? 1? 1? 1? 1? 1?

!ZONYL+12 +198 +0 FSO 100?

!N-methyl-? 5? 5? 5? 5? 5? 5? 5? 5?

!pyrrolidinone?

!BADS02? 0? 0.025? 0.0625? 0.125? +13 ? 0.25? 0.25? 0.5?

!1% aq. sol. BADS02? +13 ? +13 ? +13 ? +13 ? 21.8? +13 ? +13 ? +13 ?

!deionized water? 51.02? 51.00? 50.96? 50.90? 21.5? 50.99? 51.15? 51.12?

!2.5% aqueous NH+HD 4+L OH? 1.28? 1.28? 1.28? 1.28? 9.0? 1.06? 0.9? 0.68?

!pH? 3.41? 3.3? 3.17? 3.45? 3.26? 3.53? +TC 2.6+14 2.8? 3.55?

!+UZ,1/11 COVERAGE +8 mg/m+HU 2+L +9 ?

!PEDOT/PSS? 200? 200? 200? 200? +TC 200? 200? +TA 200? 200?

!BADS02? 0? 10? 25? 50? +10 87*? 100? 100? 200?

!ZONYL+12 +198 +0 FSO 100? 8? 8? 8? 8? +10 8? 8? 8? 8+TZ,1/52 ?

!+L6 *2.0 +33 +0 10+HU +31 4 +L mol/m+HU 2+L

!+PS

Item character count = 722

CWU Table Item #: 0542 (2 columns)

TABLE 30

| | SAMPLE | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | LXXXI (COMP) | LXXXII | LXXXIII | LXXXIV | LXXXV | LXXXVI | LXXXVII | LXXXVIII |
| BADS02 [mg/m ²] | 0 | 10 | 25 | 50 | 87 | 100 | 100 | 200 |
| R _s of exposed layer unrinsed with water [Ω/square] | 2.2 × 10 ³ | 1.9 × 10 ⁴ | 1.5 × 10 ⁵ | 1.5 × 10 ⁶ | 5.3 × 10 ⁶ | 7.8 × 10 ⁶ | 1.0 × 10 ⁷ | 2.0 × 10 ⁷ |
| R _s of exposed areas rinsed with water [Ω/square] | 2.9 × 10 ³ | 3.4 × 10 ⁴ | 4.9 × 10 ⁵ | 7.2 × 10 ⁶ | 6.7 × 10 ⁷ | 1.1 × 10 ⁸ | 1.5 × 10 ⁸ | 1.1 × 10 ⁸ |
| R _s of non- exposed areas un- rinsed with H ₂ O [Ω/square] | 2.1 × 10 ³ | 2.5 × 10 ³ | 3.3 × 10 ³ | 5.9 × 10 ³ | 6.2 × 10 ³ | 1.2 × 10 ⁴ | 1.3 × 10 ⁴ | 6.5 × 10 ⁴ |
| R _s of non- exposed areas rinsing with water [Ω/square] | 2.7 × 10 ³ | 3.8 × 10 ³ | 5.1 × 10 ³ | 1.1 × 10 ⁴ | 6.2 × 10 ³ | 2.1 × 10 ⁴ | 1.8 × 10 ⁴ | 1.4 × 10 ⁵ |
| R _s ratio of exposed areas to unexposed areas after rinsing with water | 1.1 | 8.95 | 96.1 | 654.5 | 10806 | 5238 | 8333 | 785.7 |

+T2 TABLE 30+HZ,1/50

!+HC,9 +UZ,9/50 SAMPLE?

!+HC,9 LXXXI? +HC,14 ? +HC,19 ? +HC,24 ? +HC,29 ? +HC,34 ? +HC,39 ? +HC,44 ?

!(COMP)? LXXXII? LXXXIII? LXXXIV? LXXXV? LXXXVI? LXXXVII? LXXXVIII+HZ,1/50 ?

!+TL,1 BADS02 +8 mg/m+HU 2+L +9 ? +TC,9 0? +TC,14 10? +TC,19 25? +TC,24 50? +TC,29 87?

+TC,34 100? +TC,39 100? +TC,44 200?

!R+HD s +L of exposed? 2.2 +33 +0 10+HU 3? 1.9 +33 +0 10+HU 4? 1.5 +33 +0 10+HU 5? 1.5

+33 +0 10+HU 6? 5.3 +33 +0 10+HU 6? 7.8 +33 +0 10+HU 6? 1.0 +33 +0 10+HU 7? 2.0 +33 +0

10+HU 7?

!layer unrinsed?

!with water?

!+8 +106 /square+9 ?

!R+HD s +L of exposed? 2.9 +33 +0 10+HU 3? 3.4 +33 +0 10+HU 4? 4.9 +33 +0 10+HU 5? 7.2

+33 +0 10+HU 6? 6.7 +33 +0 10+HU 7? 1.1 +33 +0 10+HU 8? 1.5 +33 +0 10+HU 8? 1.1 +33 +0

10+HU 8?

!areas rinsed?

!with water?

!+8 +106 /square+9 ?

!R+HD s +L of non-? 2.1 +33 +0 10+HU 3? 2.5 +33 +0 10+HU 3? 3.3 +33 +0 10+HU 3? 5.9 +33

DA: data54 — MD: 6/23/2003 — N: 5,790,513 — F: 08 — 7/18/2003 - 8:03:05 AM

3

+0 10+HU 3? 6.2 +33 +0 10+HU 3? 1.2 +33 +0 10+HU 4? 1.3 +33 +0 10+HU 4? 6.5 +33 +0 10+HU 4?

!exposed areas un-?

!rinsed with H+HD 2+L 0?

!+8 +106 /square+9 ?

!R+HD s +L of non-? 2.7 +33 +0 10+HU 3? 3.8 +33 +0 10+HU 3? 5.1 +33 +0 10+HU 3? 1.1 +33 +0 10+HU 4? 6.2 +33 +0 10+HU 3? 2.1 +33 +0 10+HU 4? 1.8 +33 +0 10+HU 4? 1.4 +33 +0 10+HU 5?

!exposed areas?

!rinsing with water?

!+8 +106 /square+9 ?

!R+HD s +L ratio of? 1.1? 8.95? 96.1? 654.5? 10806? 5238? 8333? 785.7?

!exposed areas to?

!unexposed areas?

!after rinsing?

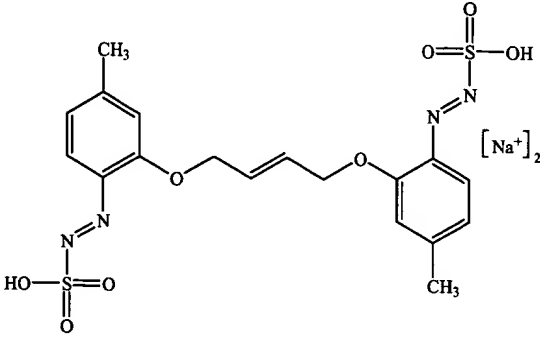
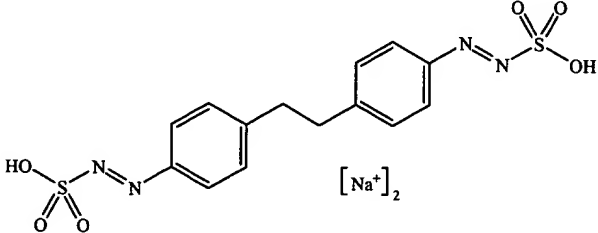
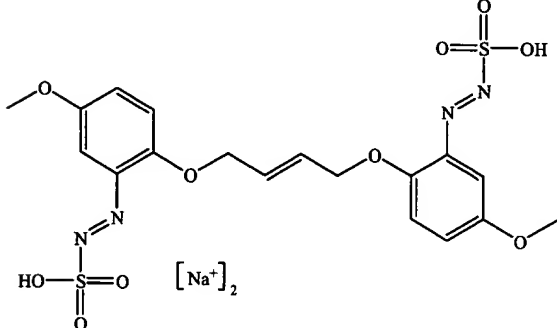
!with water+TZ,1/50 ?

!+PS

Item character count = 867

Folder character count = 1589

CWU Table Item #: 0150 (2 columns)

| | λ_{\max} [nm] | absorption of a 25 ppm solution in water | |
|--------|--------------------------|---|--|
| BADS01 | 308 | 0.785 |  |
| BADS02 | 308 | 1.568 |  |
| BADS03 | — | — |  |

+T2 +HZ,1/48

!+HC,1 ? +HC,6 ? +HC,9 absorption? +HC,15 ?

! ? ? of a 25 ppm?

! ? +80 +HD max? solution?

! ? +8 nm+9 ? in water+HZ,1/48 ?

!+TC,1 ? +TC,6 ? +TC,9 ? +TC,15 ?

!BADS01 ? 308? 0.785? +GET,0001 ?

!+0

!BADS02? 308? 1.568? +GET,0002 ?

!+0

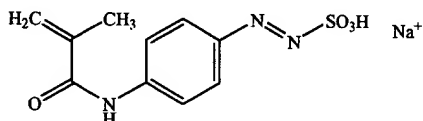
!BADS03? ? +13 ? +GET,0003 +TZ,1/48 ?

!+PS

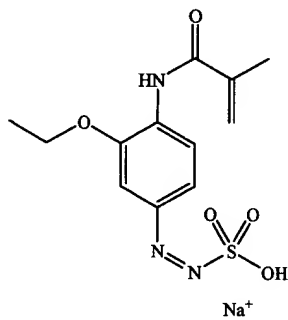
Item character count = 140

CWU Table Item #: 0170 (2 columns)

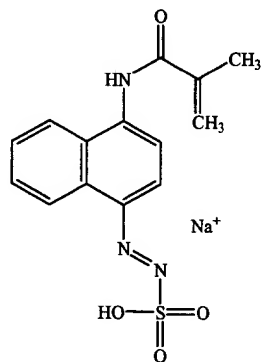
ADS-MONOMER 01



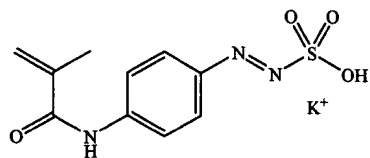
ADS-MONOMER 02



ADS-MONOMER 03

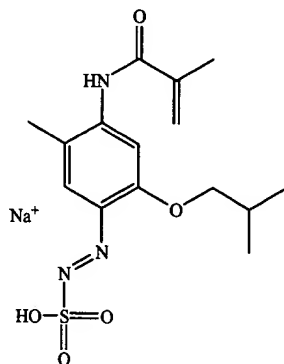


ADS-MONOMER 04

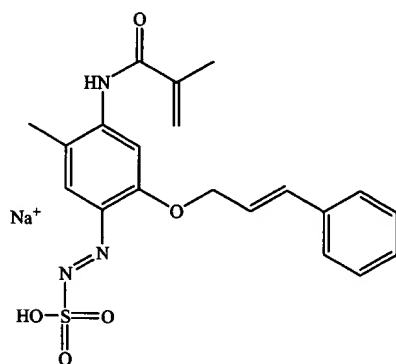


-continued

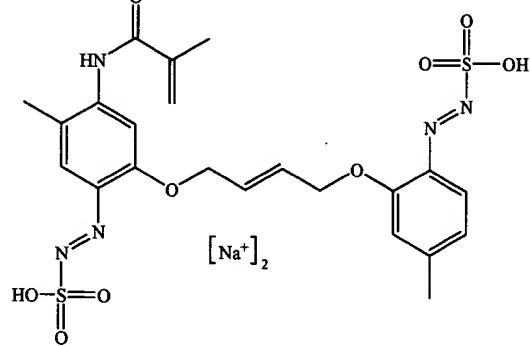
ADS-MONOMER 05



ADS-MONOMER 06



ADS-MONOMER 07



+T2 +HZ, 1/40

!+TC, 1 ? +TC, 11 ?

!ADS-MONOMER 01? +GET, 0004 ?

!+0

!ADS-MONOMER 02? +GET, 0005 ?

!+0

!ADS-MONOMER 03? +GET, 0006 ?

!+0

!ADS-MONOMER 04? +GET, 0007 ?

!+0

!ADS-MONOMER 05? +GET, 0008 ?

DA: data54 — MD: 6/23/2003 — N: 5,790,513 — F: 31 — 7/18/2003 - 8:03:08 AM

4

!+0

!ADS-MONOMER 06? +GET,0009 ?

!+0

!ADS-MONOMER 07? +GET,0010 +TZ,1/40 ?

!+PS

Item character count = 148

Folder character count = 288